1	2	3	4	5	6	7	8	9	10	11
DISTRICT.	Subdivision.	Total area of subdivision and district in acres.	Total area estimated to be under cultivation in acres.	Approximate normal area under winter rice in acres.	Approximate area under winter rice last year (1901) in acres.	Estimated area under winter rice this year (1902) in acres.	Taking 100 to represent the normal outturn, how much represented the outturn last year (1901) ?	Taking 100 to represent the normal outturn, how much will represent this year's outturn (1902) ?	Remarks by District Officers.	Remarks by the Department of Land Records and Agriculture, Bengal.
Bankura	Sadar	1,229,440	428,800	346,600	330,000	250,000	88	50	There was slight rain during the latter part of September, and since then the rainfall has been very scanty. Hence the outturn is much below the normal.	
	Vishnupur ...	448,000	214,000	160,400	175,000	150,000	88	60		
	District Total ...	1,677,440	642,800	507,000	505,000	400,000	88	54		
Midnapore	Sadar	3,319,040	1,240,300	717,500	750,500	750,500	90	85	The short crop is due to late rains for transplantation and deficient rains in September and October.	
	Contai		440,100	356,700	354,300	354,300	95	85		
	Tamluk		329,600	220,200	220,000	220,000	80	80		
	Ghatal		171,600	118,300	105,000	105,000	75	80		
	District Total ...	3,319,040	2,190,600	1,412,700	1,429,800	1,429,800	88	84		
Hooghly ...	Sadar	282,880	124,000	115,900	100,000	110,900	75	80	Owing to want of rain in October, when it was badly needed, the outturn is below the preliminary estimate.	
	Serampore ...	219,520	111,600	85,000	85,000	85,000	75	90		
	Arambagh ...	258,560	117,000	78,000	68,900	60,000	75	60		
	Howrah	110,720	47,200	40,800	40,800	45,900	75	75		
	Ulubaria	215,680	89,100	75,600	60,000	65,000	75	80		
	District Total ...	1,087,360	488,900	396,200	354,700	366,800	75	78		

24-Parganas	Sadar	3,574,851	462,700	261,700	304,100	390,300	100	100	The figure in column 5 of th Sadar subdivision has been revised.
	Barasat		173,400	102,100	117,100	117,100	90	100	
	Basirhat		207,900	142,500	142,500	142,500	90	100	The outturn will be adversely affected in the Barasat and Diamond Harbour subdivisions, owing to partial failure of October rains.
	Diamond Harbour		240,200	239,500	243,200	239,400	115	75	
	District Total ...	3,574,851	1,084,200	745,300	806,900	889,300	101	93	
Nadia ...	Sadar	448,640	174,100	16,300	16,000	15,400	50	80	The decrease in the outturn as compared with that shown in the preliminary forecast is due to want of rainfall during October.
	Kushtia	381,440	134,700	19,600	19,400	27,400	95	75	
	Meherpur	404,480	142,600	21,400	25,000	30,000	60	85	
	Chuadanga ...	279,680	82,700	5,600	8,900	8,700	50	58	
	Ranaghat	273,280	96,400	22,200	28,900	27,700	50	67	
	District Total ...	1,787,520	630,500	85,100	98,200	109,200	61	75	
Murshid-abad.	Sadar	481,280	392,300	67,600	593,000	59,000	75	80	
	Lalbagh	238,080	142,700	43,900	44,700	67,400	61	78	
	Jangipur	326,400	224,600	27,000	25,000	27,000	63	100	
	Kandi	327,680	225,900	138,600	165,200	138,600	66	75	
	District Total ...	1,373,440	985,500	277,100	283,900	292,000	67	79	
Jessore ...	Sadar	568,960	304,000	153,300	140,000	140,200	80	95	
	Jhenida	304,000	230,000	64,000	43,100	40,000	100	80	
	Bongong	415,360	240,000	77,000	150 000	156,000	75	60	
	Magura	272,000	171,500	82,000	82,000	54,700	40	50	
	Narail	311,680	240,300	180,300	128,000	125,000	80	75	
	District Total ...	1,872,000	1,203,800	556,600	543,100	515,900	74	74	

1	2	3	4	5	6	7	8	9	10	11
DISTRICT.	Subdivision.	Total area of subdivision and district in acres.	Total area estimated to be under cultivation in acres.	Approximate normal area under winter rice in acres.	Approximate area under winter rice last year (1901) in acres.	Estimated area under winter rice this year (1902) in acres.	Taking 100 to represent the normal outturn, how much represented the outturn last year (1901) ?	Taking 100 to represent the normal outturn, how much will represent this year's outturn (1902) ?	Remarks by District Officers.	Remarks by the Department of Land Records and Agriculture, Bengal.
Khulna ..	Sadar	1,036,886	293,400	224,900	228,600	235,500	80	100	The increase in the area this year is due to favourable rainfall.	
	Satkhira	814,643	299,500	199,200	202,000	202,000	75	100		
	Bagirhat	965,523	277,100	234,000	234,000	234,000	80	90		
	Area of boundary khals and rivers of the Sundarbans.	317,440	.....	.....	.....	.....	.....	.....		
	District Total ...	3,168,942	870,000	658,100	664,600	671,500	78	97		
Rajshahi ...	Sadar	581,760	390,000	192,000	182,000	192,000	70	110	The season has been very favourable to winter addy.	
	Nator	523,520	402,100	197,400	172,300	197,400	75	110		
	Naogaon	557,760	470,000	307,600	250,000	307,600	63	110		
	District Total ...	1,663,040	1,262,100	697,000	604,300	697,000	69	110		
Dinajpur ..	Sadar	1,776,640	1,280,200	869,200	774,800	780,000	60	100		
	Thakurgaon ...	749,440	417,400	251,106	251,100	260,000	60	100		
	District Total ...	2,526,080	1,697,600	1,120,300	1,025,900	1,040,000	60	100		

Jalpaiguri	Sadar	1,072,000	659,600	356,100	302,400	344,500	75	100	The figures in columns 4 and 5 have been revised.
	Alipur Duars ...	822,600	265,400	158,800	144,200	152,700	100	100	
	District Total ...	1,894,600	925,000	514,900	446,600	497,200	83	100	
Darjeeling	Sadar (including Kalimpong).	464,640	66,000	11,500	11,500	11,500	100	108	
	Kurseong ...	118,400	13,000	.....	.....	.....	.....	.....	
	Siliguri ...	161,920	69,200	52,700	42,200	52,700	100	117	
	District Total ...	744,960	148,200	64,200	53,700	64,200	100	115	
Rangpur ...	Sadar	730,240	486,800	309,000	290,000	300,000	75	100	Since the submission of the preliminary forecast a larger area, viz., 10,000 acres in Gaibanda and 2,000 acres in Nilphamari, was subsequently cultivated. Hence the increase in area under crop. The outturn is due to favourable rainfall during the year.
	Kurigram	602,880	468,900	209,400	209,400	209,400	89	100	
	Gaibanda ...	487,680	371,200	215,000	175,000	200,000	75	100	
	Nilphamari ...	414,720	275,800	92,800	88,000	92,000	100	110	
	District Total ...	2,235,520	1,602,700	826,200	762,400	801,400	79	101	
Bogra ...	Whole district ...	869,760	660,000	303,000	316,000	320,000	75	117	The increase both in area and outturn is due to seasonable and sufficient rainfall.
Pabna ...	Sadar	564,480	423,000	405,200	405,000	400,000	100	75	The same remarks will apply as were made in the preliminary forecast, except the fact that the high floods in September damaged the crops in the low lands of the Serajgunge subdivison to some extent.
	Sirajganj	612,480	459,500	210,800	236,000	230,000	100	100	
	District Total ...	1,176,960	882,500	616,000	641,000	630,000	100	84	
Dacca ...	Sadar	810,240	478,400	226,000	226,000	225,000	95	100	The decrease in the area sown is due to abnormal rainfall during the sowing season; but owing to sufficient rainfall in July and August, an average crop is expected this year.
	Manikganj ...	312,960	250,400	214,800	203,000	203,000	100	100	
	Munshiganj ...	247,040	197,500	68,500	62,000	61,900	100	100	
	Narayanganj ...	410,240	287,200	126,300	125,000	108,000	80	100	
	District Total ...	1,780,480	1,213,500	635,600	616,000	597,900	94	100	

1	2	3	4	5	6	7	8	9	10	11
DISTRICT.	Subdivision.	Total area of subdivision and district in acres.	Total area estimated to be under cultivation in acres.	Approximate normal area under winter rice in acres.	Approximate area under winter rice last year (1901) in acres.	Estimated area under winter rice this year (1902) in acres.	Taking 100 to represent the normal outturn, how much represented the outturn last year (1901)?	Taking 100 to represent the normal outturn, how much will represent this year's outturn (1902)?	Remarks by District Officers.	Remarks by the Department of Land Records and Agriculture, Bengal.
Mymensingh.	Sadar	1,183,360	697,000	246,700	250,500	250,500	100	110		
	Netrakona ...	697,600	284,500	162,000	163,000	162,000	90	100		
	Kishorganj ...	867,520	254,000	132,700	125,000	100,000	100	89		
	Jamalpur	824,960	627,200	275,100	314,000	314,000	80	90		
	Tangail	679,040	533,000	205,000	210,000	205,000	100	95		
	District Total ...	4,052,480	2,405,700	1,011,500	1,059,500	1,031,500	93	96		
Faridpur	Sadar	550,400	409,000	270,000	260,000	265,000	100	100		
	Goalundo	273,920	206,000	58,000	57,700	58,000				
	Madaripur ...	635,520	526,600	233,000	232,800	233,000				
	District Total ...	1,459,840	1,132,600	561,000	550,500	556,000	100	100		
Backerganj	Sadar	711,040	450,000	325,000	325,000	325,000	100	100	A normal outturn is expected everywhere. The slight increase in area in the Bhola subdivision is due to the fact that some land under *aus* was sown with *aman*, when the former crop failed.	
	Pirojpur	442,880	350,000	275,000	275,000	275,000				
	Patuakhali ...	787,840	350,000	300,000	300,000	300,000				
	Bhola ...	393,600	255,000	200,000	200,000	210,000				
	District Total ...	2,335,360	1,405,000	1,100,000	1,100,000	1,110,000	100	100		

Tippera ...	Sadar	730,880	547,800	189,200	187,400	274,600	81	90	As was explained in the preliminary forecast, the increase in the area sown is due to the failure of the jute crop. The improvement shown on the preliminary forecast is due to favourable rainfall during the past two months.
	Brahmanbaria ...	492,160	384,000	200,000	200,000	224,000	87	85	
	Chandpur ...	376,320	243,000	175,000	175,000	107,000	90	100	
	District Total ...	1,599,360	1,179,800	564,200	562,400	605,600	86	90	
Noakhali	Sadar	830,720	613,500	425,500	422,900	424,000	100	95	The decrease in column 4 is due to revision of estimate and that in column 9 is due to excessive rainfall at the time of sowing. The increase in column 7 is partly due to the fact that the area left unsown by *aus* paddy on account of excessive rainfall was taken up by the winter rice and is partly the result of a special enquiry.
	Feni	223,080	171,300	141,400	141,500	141,400	100	100	
	District Total ...	1,052,800	784,800	566,900	570,400	565,400	100	96	
Chittagong	Sadar	1,023,315	446,900	402,200	402,200	400,000	110	100	
	Cox's Bazar ...	571,500	112,900	85,400	85,400	85,400	110	100	
	District Total ...	1,594,815	559,800	487,600	487,600	485,400	110	100	
Patna ...	Sadar	393,040	343,400	154,000	120,000	150,700	50	75	The figures in column 7 against Sadar and Dinapur have been revised. For want of sufficient rain at the time of transplantation the full normal area was not sown.
	Barh	336,640	285,100	99,900	40,000	67,000	36	65	
	Bihar	507,520	378,100	237,300	168,700	177,000	50	75	
	Dinapore	95,360	75,500	47,600	47,600	47,600	60	75	
	District Total ...	1,332,560	1,082,100	538,800	376,300	442,300	50	73	
Gaya ...	Sadar	1,219,200	917,900	496,800	245,000	326,000	65	85	The full normal area could not be cultivated for want of sufficient and timely rain. The outturn also has been affected for the same reason.
	Nawada	611,200	489,600	370,000	370,000	370,000	50	100	
	Jehanabad ...	387,840	321,900	262,600	209,000	209,000	60	100	
	Aurangabad ...	797,440	478,100	241,500	120,000	226,800	35	90	
	District Total ...	3,015,680	2,207,500	1,318,300	944,000	1,131,800	54	94	

1	2	3	4	5	6	7	8	9	10	11
DISTRICT.	Subdivision.	Total area of subdivision and district in acres.	Total area estimated to be under cultivation in acres.	Approximate normal area under winter rice in acres.	Approximate area under winter rice last year (1901) in acres.	Estimated area under winter rice this year (1902) in acres.	Taking 100 to represent the normal outturn, how much represented the outturn last year (1901)?	Taking 100 to represent the normal outturn, how much will represent this year's outturn (1902)?	Remarks by District Officers.	Remarks by the Department of Land Records and Agriculture, Bengal.
Shahabad	Arrah	584,320	487,400	325,000	243,000	340,000	54	100		
	Buxar	428,160	340,000	234,500	231,500	234,500	66	90		
	Sasseram	953,600	544,400	355,000	153,300	206,800	44	95		
	Bhabhua	832,640	470,000	313,500	280,000	300,000	50	95		
	District Total ...	2,798,720	1,841,800	1,228,000	907,800	1,081,300	54	95		
Saran ...	Sadar	673,140	547,500	141,200	134,200	127,000	25	75	Since the submission of the preliminary forecast, rains fell in the latter part of September. Hence area under the crop increased and the prospect of outturn improved.	
	Siwan	42,146	423,300	142,000	130,000	80,000	25	60		
	Gopalganj ...	493,440	386,400	90,600	90,600	90,000	25	100		
	District Total ...	1,708,726	1,357,200	373,800	354,800	297,000	25	78		
Champaran	Sadar	971,520	760,900	257,000	257,000	257,000	40	120	The increase in the area and outturn is due to favourable rainfall throughout the year.	
	Bettiah	1,288,320	686,700	293,000	250,000	300,000	40	110		
	District Total ...	2,259,840	1,447,600	550,000	507,000	557,000	40	115		

Muzaffarpur.	Sadar	780,185	654,800	216,000	216,000	216,000	30	5	
	Hajipur	510,895	399,200	105,100	105,100	105,100	25	88	
	Sitamarhi	650,174	573,000	337,500	337,500	337,500	50	100	
	District Total ...	1,941,254	1,627,000	658,600	658,600	658,600	39	90	
Darbhanga	Sadar	2,142,690	617,400	382,000	375,000	425,000	38	80	The floods destroyed the crops in places : hence the reduced outturn.
	Madhubani ...		668,400	462,400	350,000	445,000	51	93	
Monghyr...	Samastipur ...		392,200	123,500	108,700	102,900	44	77	
	District Total ...	2,142,690	1,678,000	967,900	833,700	972,900	44	86	
	Sadar	997,760	698,200	265,100	210,700	211,000	30	80	
	Begusarai	492,160	389,300	14,700	14,700	16,900	60	100	
	Jamui	1,019,520	515,300	363,800	364,300	364,300	40	75	
	District Total ...	2,509,440	1,582,800	643,600	589,700	592,200	44	77	
Bhagalpur	Sadar	597,760	464,600	250,000	250,000	240,000	60	100	Favourable rainfall since the submission of the preliminary forecast has improved the outturn.
	Banka	756,480	588,000	527,400	527,400	520,000	75	100	
	Madhipura ...	752,640	598,000	318,800	318,800	318,800	40	90	
	Supaul	597,760	447,000	202,000	195,200	195,000	40	105	
	District Total ...	2,704,640	2,097,000	1,298,200	1,291,400	1,282,800	58	98	
Purnea ...	Sadar	3,195,513	790,000	320,000	225,000	319,000	90	100	The winter rice crop has been good this year.
	Kishanganj ...		580,400	328,000	210,000	328,000	60	100	
	Araria		269,400	130,000	124,000	130,000	50	100	
	District Total ...	3,195,513	1,639,800	778,000	559,000	777,000	70	100	

1	2	3	4	5	6	7	8	9	10	11
DISTRICT.	Subdivision.	Total area of subdivision and district in acres.	Total area estimated to be under cultivation in acres.	Approximate normal area under winter rice in acres.	Approximate area under winter rice last year (1901) in acres.	Estimated area under winter rice this year (1902) in acres.	Taking 100 to represent the normal outturn, how much represented the outturn last year (1901)?	Taking 100 to represent the normal outturn, how much will represent this year's outturn (1902)?	Remarks by District Officers.	Remarks by the Department of Land Records and Agriculture, Bengal.
Malda ...	Whole district ...	1,216,000	672,800	266,500	202,700	230,000	65	104	The decrease in the outturn as compared with the preliminary forecast is due to want of rain in October last.	
Sonthal Parganas.	Dumka	914,560	269,300	92,100	92,100	92,100	85	110	The figures have been revised. Owing to timely rainfall since the latter part of July, the outturn has been above the average.	
	Deoghar	610,560	234,100	49,700	49,700	49,700	65	100		
	Godda	618,880	280,500	99,000	99,000	74,600	100	70		
	Jamtara	445,440	170,100	58,800	58,000	82,000	60	100		
	Pakour	437,120	265,400	133,000	132,000	133,000	63	125		
	Rajmahal	473,600	325,900	150,000	131,000	140,200	50	100		
	District Total ...	3,500,160	1,545,300	579,600	553,800	541,600	70	104		
Cuttack ...	Sadar	2,203,149	393,100	341,100	358,500	388,900	78	90	The abrupt cessation of rains at the most critical period of the growth and maturity of the crop (from 25th September to 25th October) caused the reduction in the outturn, which would otherwise have been bumper.	
	Kendrapara ...		410,200	290,100	310,000	327,700	75	100		
	Jajpur		320,700	262,400	262,400	262,400	65	80		
	Banki		37,200	23,000	23,000	23,000	75	50		
	District Total ...	2,203,149	1,161,200	916,600	983,900	1,002,000	73	90		
Balasore ...	Sadar	739,110	466,000	345,100	351,000	355,000	65	85	Owing to a prolonged and unseasonable drought in September and October, the crop was seriously affected. Rain was subsequently received in most parts of the district in the latter part of October. But it cannot be expected that a full normal crop will be harvested.	
	Bhadrak	595,258	404,800	300,800	300,800	300,800	80	80		
	District Total ...	1,334,368	870,800	645,900	651,800	655,800	72	83		

Angul ...	Angul	563,840	160,000	74,600	75,000	76,000	50	50	The low outturn is due to continued drought from the last week of September up to date in Angul. A heavy shower of 2·37 inches in the Khondmals towards the end of October saved the crops to a certain extent.
	Khondmals ...	512,000	100,000	50,000	50,000	50,000	50	75	
	District Total ...	1,075,840	260,000	124,600	125,000	126,000	50	60	
Puri ...	Sadar	1,599,360	423,750	318,200	335,900	345,000	90	90	
	Khurda		314,450	200,000	210,000	240,000	84	89	
	District Total ...	1,599,360	738,200	518,200	545,900	585,000	88	90	
Hazaribagh.	Sadar	3,210,880	1,132,000	615,200	615,000	570,200	57	80	The rainfall in October was insufficient. Hence the outturn was below the average.
	Giridih	1,282,560	571,000	392,500	390,000	392,500	55	100	
	District Total ...	4,493,440	1,703,000	1,007,700	1,005,000	962,700	56	88	
Ranchi ...	Whole district ...	4,569,600	1,573,300	808,700	808,000	808,700	75	88	Early cessation of rains accounts for the low outturn.
Palamau ...	Whole district ...	3,139,200	637,600	277,900	250,500	230,500	50	75	The area decreased owing to want of sufficient rain for sowing and transplanting. The want of rain in October has told upon the outturn.
Manbhum	Sadar	2,142,160	1,118,500	762,500	720,600	682,500	120	105	
	Gobindpur ...	513,920	300,700	183,000	220,100	220,100	120	120	
	District Total ...	2,654,080	1,419,200	945,500	940,700	902,600	120	109	
Singhbhum	Whole district ...	2,526,080	838,800	315,000	314,000	315,000	70	96	The decrease in the expected outturn is due to the deficiency of rainfall.
	Grand Total ...	97,509,988	53,990,100	29,879,300	27,175,400	29,307,900	74	94	

APPENDIX II.

Statement of Rainfall from May to November 1902.

DIVISION AND DISTRICT.		MAY 1902.		JUNE 1902.		JULY 1902.		AUGUST 1902.		SEPTEMBER 1902.		OCTOBER 1902.		NOVEMBER 1902.*	
		Normal average.	Actual rainfall.	Normal average.	Actual rainfall.	Normal average.	Actual rainfall.	Normal average.	Actual rainfall.	Normal average.	Actual rainfall.	Normal average.	Actual rainfall.	Normal average.	Actual rainfall.
1		2	3	4	5	6	7	8	9	10	11	12	13	14	15
		Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
BURDWAN.	Burdwan	5·08	4·37	10·15	6·89	12·25	10·84	11·76	7·50	8·40	8·34	3·36	1·37	0·63	0·26
	Birbhum	4·40	4·35	11·30	4·50	13·49	17·76	11·45	12·34	10·97	15·65	3·89	1·29	0·41	0·29
	Bankura	4·36	6·09	10·83	3·92	12·22	9·01	11·89	6·98	8·70	6·24	3·15	0·65	0·54	0·28
	Midnapore	5·45	7·12	10·25	3·99	12·51	10·91	12·86	13·20	9·69	6·74	4·43	0·86	0·68	0·43
	Hooghly ...	5·57	7·86	10·36	7·49	12·05	11·58	12·55	9·56	8·85	9·02	4·00	1·03	0·61	0·63
	Howrah ...	5·27	8·46	10·93	4·92	11·53	15·00	11·39	11·23	9·45	5·90	3·79	1·51	0·50	0·38
PRESIDENCY.	24-Parganas	5·49	7·88	10·89	6·91	13·05	12·81	13·29	11·14	10·04	9·08	5·21	1·44	0·82	0·47
	Nadia ...	6·72	8·99	9·99	7·93	10·36	8·72	10·96	8·43	8·48	9·41	4·04	2·84	0·74	0·32
	Murshidabad.	5·13	7·18	10·14	6·04	10·93	14·98	10·45	13·21	9·35	14·01	3·75	2·57	0·49	0·16
	Jessore ...	7·13	10·31	11·69	8·62	10·64	10·47	10·67	8·38	8·45	12·32	4·45	2·53	0·88	0·16
	Khulna ...	6·45	9·76	12·74	9·70	13·10	16·62	12·32	9·99	9·55	9·73	5·21	0·87	0·93	0·48
RAJSHAHI.	Rajshahi	6·04	6·57	10·51	15·26	11·81	12·62	10·35	11·52	10·50	12·43	3·66	2·26	0·38	0·23
	Dinajpur	6·21	7·53	13·78	12·52	16·17	21·95	12·41	15·35	13·05	18·33	3·48	2·73	0·09	nil
	Jalpaiguri	14·22	13·30	26·66	28·93	33·22	32·81	26·53	30·17	23·00	43·92	5·86	2·80	0·35	0·35
	Darjeeling	9·05	8·18	22·59	21·76	31·91	35·65	24·94	26·42	19·29	45·90	4·10	4·06	0·32	0·41
	Rangpur ...	10·21	12·52	17·06	15·70	14·81	14·44	12·58	14·59	14·10	20·10	4·67	4·30	0·15	nil
	Bogra ...	7·91	9·57	12·83	16·55	13·26	14·74	11·48	14·63	10·95	16·87	4·46	5·02	0·55	nil
	Pabna ...	7·60	9·18	11·49	20·04	11·06	9·63	11·04	9·37	9·49	15·50	4·19	3·21	0·57	0·06
DACCA.	Dacca ...	9·61	13·14	12·64	19·66	12·95	12·85	12·59	12·48	9·05	12·59	4·26	1·78	1·03	0·03
	Mymensingh.	11·30	13·97	17·90	19·89	16·47	21·86	14·96	16·46	12·73	11·47	5·06	3·41	0·60	nil
	Faridpur...	8·30	11·56	12·37	16·58	11·72	13·62	11·49	11·23	8·28	11·89	4·39	1·30	0·95	0·13
	Backerganj.	8·58	14·51	17·37	25·41	17·45	29·18	16·21	14·18	11·35	15·90	6·38	4·04	1·05	0·26
CHITTAGONG.	Tippera ...	10·21	11·92	14·58	20·57	13·39	12·01	12·78	12·12	9·49	9·58	4·49	4·24	0·94	0·04
	Noakhali	10·55	13·69	22·20	27·24	24·01	31·97	23·92	23·25	14·15	13·09	7·52	4·92	1·44	nil
	Chittagong	11·17	13·05	23·56	27·75	26·16	35·31	21·92	15·60	12·34	14·05	7·62	5·71	1·29	nil
PATNA.	Patna ...	1·74	0·92	7·71	2·89	12·40	11·42	11·21	8·82	7·20	12·70	2·66	0·52	0·19	nil
	Gaya ...	1·18	0·79	6·52	2·45	12·40	14·42	11·72	6·69	6·55	11·07	2·27	0·27	0·20	0·07
	Shahabad ...	0·73	0·26	6·41	2·58	12·72	16·89	11·64	6·63	6·86	10·33	2·63	0·50	0·33	0·07
	Saran ...	1·55	2·00	7·91	2·56	11·77	10·57	11·00	7·29	8·10	13·07	2·67	1·10	0·18	0·01
	Champaran	2·61	4·24	9·34	5·24	13·72	18·41	12·81	13·02	9·93	13·70	3·28	1·02	0·11	nil
	Muzaffarpur	2·29	1·72	7·41	4·89	12·03	12·37	11·00	9·87	8·17	12·64	2·61	1·62	0·11	nil
	Darbhanga	2·56	3·36	7·47	5·46	12·59	13·89	12·51	10·19	10·06	19·27	2·16	2·34	0·11	nil
BHAGALPUR.	Monghyr	2·16	1·36	7·62	4·85	13·33	11·13	11·41	6·86	9·57	11·70	2·49	1·41	0·08	0·02
	Bhagalpur	3·15	3·94	8·34	5·11	12·72	11·51	11·66	8·31	10·19	18·33	2·54	1·60	0·07	0·01
	Purnea ...	5·43	6·70	12·60	9·90	18·16	17·08	14·98	13·22	15·43	17·24	2·86	1·40	0·07	nil
	Malda ...	4·54	4·28	10·11	9·53	12·91	11·48	11·07	8·43	11·54	13·00	3·39	2·43	0·22	0·01
	Sonthal Parganas.	2·75	3·04	9·79	6·30	12·68	18·21	11·66	7·88	11·19	14·56	3·15	1·47	0·28	0·11
ORISSA.	Cuttack ...	4·23	3·43	9·71	5·20	11·89	21·97	12·77	12·39	10·9	7·50	6·19	1·01	1·67	0·03
	Balasore ...	5·03	4·14	9·37	5·62	12·15	17·47	11·86	9·71	11·23	7·50	5·42	1·18	1·01	0·10
	Puri ...	2·96	2·40	8·63	5·18	10·91	19·16	12·31	15·40	9·89	6·88	7·21	1·46	1·96	0·81
CHOTA NAGPUR.	Hazaribagh	1·89	1·76	8·43	3·15	14·33	14·29	12·58	7·17	8·37	13·51	3·13	0·86	0·31	0·03
	Ranchi	1·69	1·76	9·64	2·44	14·38	15·89	13·31	10·65	8·39	10·58	2·63	0·71	0·38	0·53
	Palamau	0·94	0·35	6·89	0·48	13·85	13·64	13·42	5·45	7·65	12·65	2·69	0·24	0·29	0·04
	Manbhum	2·81	3·08	9·59	4·10	12·81	13·33	12·55	9·20	8·36	14·89	2·62	1·13	0·31	0·55
	Singhbhum	3·33	5·25	10·57	4·27	15·08	20·68	14·56	7·17	8·17	9·55	2·79	0·15	0·42	0·41

* The rainfall figures of November are not complete and are subject to revision.

APPENDIX III.

Abstract statement of estimated Acreage and Outturn of the Winter Rice Crop, 1902.

PROVINCE.	ACREAGE.							OUTTURN IN CWT.						
	Of current year's crop.	Of previous year's crop.	Average of five preceding years (viz., 1896 to 1900).	Average of eight preceding years (viz., 1893 to 1900).	Percentage by which column 2 exceeds (+) or falls short (−) of area in—			Estimated yield of current year, *i.e.*, of area in column 2.	Yield of previous year, *i.e.*, of area in column 3.	Average of five preceding years (viz., 1896 to 1900).	Average of eight preceding years (viz., 1893 to 1900).	Percentage by which column 9 exceeds (+) or falls short (−) of outturn in—		
					Column 3.	Column 4.	Column 5.					Column 10.	Column 11.	Column 12.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Bengal ...	29,307,900	27,175,400	30,448,100	30,607,100	+ 7·85	− 3·74	− 4·24	303,605,900	221,618,200	282,625,900	298,555,000	+ 37·00	+ 7·65	+ 1·69

ANNUAL ADMINISTRATION REPORT OF THE ZOOLOGICAL GARDENS CALCUTTA, FOR THE YEAR 1901-1902.

NOTIFICATION.

No. 4601 Mis.—The 15th December 1902.—The Annual Administration Report of the Zoological Gardens, Calcutta, for the year 1901-1902 and Government letter No. 4602, dated 15th December 1902, acknowledging receipt of the report, are published for general information.

W. C. MACPHERSON,
Offg. Secretary to the Government of Bengal.

The length of the report with its appendices should not in future exceed four pages in print.

REPORT OF THE HONORARY COMMITTEE

FOR THE MANAGEMENT OF THE

ZOOLOGICAL GARDEN, CALCUTTA,

FOR THE YEAR

1901-1902.

THE Honorary Committee have the honour to submit their report for the year ending 31st March 1902.

2. The acknowledgments of the Committee are due to the following gentlemen for contributing the amounts shown against their names:—

	Rs.
RAI BAHADUR CAMALESHWARI PRASAD SINGH OF MONGHYR	4,000
BABU RAMANATH GHOSE, ZAMINDAR	1,000
SYUD HOSSAIN HAIDER, ZAMINDAR OF COMILLA	1,000

also to the Burdwan Raj Estates for a grant of Rs. 3,600 for repairing the Burdwan House in the Garden; and lastly to the Maharaja Surya Kanta Acharya of Mymensingh for the very handsome donation of Rs. 10,000 for construction of an open air enclosure for the larger carnivorous animals behind the Burdwan House.

FINANCE.

3. The donations and subscriptions amounted to Rs. 20,691, against Rs. 17,588 in the previous year. The number of visitors, which, in the previous year, had been 156,061, was 182,310, without taking into account the number of students from different schools, members of some charitable institutions, and children under age, who were admitted free of charge.

The total entrance receipts were Rs. 14,242-4, against Rs. 12,145-8 in the previous year.

The Society of St. Vincent de Paul held their Annual Fancy Fair in the Garden on the 1st and 2nd January 1902, as usual, and paid to the Committee Rs. 1,480, being 25 per cent. of the receipts collected at the gate.

The expenditure under the head "Establishment" was Rs. 13,041-14-1, against Rs. 13,384-11-3.

The charges for feeding the animals were Rs. 14,372-3-6, against Rs. 13,116-5-6. The excess was due to the fluctuating rates at which food-grains were sold during the year, and to cost of supplying fresh meat for some sick and delicate

animals, and also to an increase in the number of certain animals.

Rupees 2,346-2 and Rs. 1,379-4 were respectively expended on account of purchase and transport of animals, against Rs. 2,987-9 and Rs. 384-12-3, respectively, in the previous year.

Rupees 3,590-9-3 were spent on account of repairing the Garden roads, against Rs. 1,145-3.

Rupees 15,059-4-3 were spent in connection with repairing some of the houses and enclosures of the Garden, which were in a very bad condition, against Rs. 9,083-6-3, in the previous year,

Rupees 15,493-14-3 were spent under the head "Original construction" on account of remodelling some of the houses.

Rupees 4,213-10-9 were spent under the head "Garden construction."

4. The following list contains the names of all donors who presented various specimens of animals to the Garden during the year:—

E. W. HARPER, ESQ., F.Z.S., 2 Malacca doves, 1 parrakeet, 2 munias.
BABU SATISH CHANDRA CHATTERJEE, 1 parrakeet.
F. G. CLARKE, ESQ., 1 Barn owl.
LT.-COL. SIR R. C. TEMPLE, BART., C.I.E., 13 Andaman mynas, 17 hanging parrakeets, 6 pigeons, 3 banded rails, 2 fairy blue birds.
BABU SURENDRA NATH MUNDLE, fishing cat.
T. H. BANERTZ, ESQ., 1 Sambur deer.
A. M. ROSS, ESQ., 2 Leopard cubs.
FRANK FINN, ESQ., F.Z.S.. 2 water hens, 14 Liothrix, 10 Java sparrows, 3 whistling teals, 2 gulls.
THE HON'BLE MR. JUSTICE SALE, 2 Guinea pigs.
C. WILLARD, ESQ., 1 purple coot.
S. G. PLATTS, ESQ., 1 fishing cat.
GEO. E. HARDIE, ESQ., 1 Slow Loris.
T. E. EASTON, ESQ., 1 crocodile.
HIS GRACE THE ARCHBISHOP GOETHALS, S.J., 2 Saras cranes, 1 Demoiselle crane.
C. F. MARRIMAN, ESQ., 1 Sambur deer.
C. V. JOAKIM, ESQ., 1 English cat.
L. T. R. LUCAS, ESQ , 3 Sambur deer.
M. C. PETTERS, ESQ., 1 Malayan bear cub.
F. N. SCHILLER, ESQ., 1 Leopard cub.
RAJA SURAPRATAP MAHENDRA BAHADUR OF DHENKANAL , 1 Tiger cub.
RAJA KISHORE CHANDRA BIROBAR HARI CHANDRA OF TALCHER, 1 Leopard.
RAM CHANDRA DAS, 1 banded krait.
M. MACKENZIE, ESQ., 15 cobras, 10 Sand snakes, 1 Dipsas, 2 Kraits, 1 Rat snake, 1 porcupine, 10 ducks, 1 owl, 2 fishing-eagles, and 27 rats of different kinds.
THEODORE C. EVANS, ESQ., 1 carpet snake, 1 green lizard.
THEODORE WILLMORE, I.M.S., 1 Sand snake.
G. MCCREA, ESQ., 1 parrakeet, 1 cobra.
CAPT. H. J. WALTON, I.M.S., 9 Finches, 4 Buntings, 2 Redpalls.
MAJOR A. R. S. ANDERSON, I.M.S., 6 Glossy calornis, 3 Andaman Barn owls, 1 Hawk owl, 9 Andaman lizards, 3 snakes.
MAJOR A. W. ALCOCK, I.M S., 1 Young Palm civet.
DR. H. C. BANERJEE, 1 Young cobra.
BABU SRINATH BANERJI, 1 Rhesus monkey.
RAI THAKURAI GOBIND PRASAD SINGH BAHADUR, 1 Tiger cub, 3 Sambur deer.
MISS G. M. SHILLINGFORD, 1 fishing cat.
H. H. THE SULTAN OF JOHORE, 2 Tigers.
W. BURKE, ESQ., 1 spotted owlet.
BABU MILAN CHANDRA BHATTACHARYA, 1 Hoolock.
MAJOR J. SHAKESPEAR, 1 Binturong.
J. C. FLOYD, ESQ., 1 Nilgai.

S. B. CADY, Esq., 1 duck (without web).
MRS. JUNG, 1 Paradoxure.
A. YSUFF ALI, Esq., I.C.S., 1 Leopard.
E. READ, Esq , 1 Python.
BABU BHUBAN MOHAN DASS, 1 barking deer.
THE HON'BLE MADHU SUDAN DASS, 1 Leopard
HER EXCELLENCY LADY CURZON, 2 Leopard cats.
G. A. TWEEDY, Esq., I.C.S., 1 Hog deer.
MAHARAJA OF KEONJHUR, 1 young elephant.
MISS MELL, 1 palm civet.
MAJOR E. H. BROWN, I.M.S., 1 cobra, 8 guinea pigs.
A. WRIGHT, Esq., 1 flying squirrel.
MISS WILD, 1 Leopard cat.
W. B. BUCKNILL, Esq., 1 Sand boa.
A. S. BUCKLE, Esq., 1 Clouded Leopard.
MRS. RODOCANACHI, 2 Himalayan bears.
M. L. OAKES, Esq , 1 Nilgai, 1 Sambur deer, 1 Hog deer, 4 cobras, 2 Chakar partriges, 2 Chaus cats.
D. O'BRIEN, Esq., 1 snake-eating cobra.
B. A. MARTIN, Esq., 1 Leopard.
BABU GOPALJI PATHAK, 1 Long-tailed macaque.
MRS. SALE, 9 Guinea pigs, 1 white dove.
MRS. HUMPHRIES, 1 black buck.
MAJOR MOSSE, XX. BO. I., 1 black buck.
HIS HIGHNESS SRI RAJA UDAI RAJ SINGH SAHEB BAHADUR OF KASHIPUR, 2 Tigers.
J. STEPHENS, Esq., 1 Langur monkey, 5 white doves.
T. MACKINNON, Esq., 2 Wolf cubs.
P. K. MAZUMDAR, Esq., 1 Leopard cub.
HAJI MAHAMMUD MUSTAFA KHAN, 2 Palm squirrels.
F A MÖLLER, Esq., 11 Hill snakes.

5. The following animals were born in the Garden :—

2 spotted deer, 1 Rhesus monkey, 1 sambur deer, 1 Banteng calf, 3 Andaman pigs, 1 scarlet ibis, 3 purple coots, and 1 crested pigeon

6. The following comparative tables will show how the various collection of animals in the Garden stood during the last four years:—

Year.		Mammals.	Birds.	Reptiles.
1898-99	...	447	591	157
1899-1900	...	449	752	187
1900-1901	...	462	905	218
1901-1902	...	490	914	240

7. The following table will show additions to the collection of animals in each of the last four years :—

Year.		Mammals.	Birds.	Reptiles.
1898-99	...	103	258	69
1899-1900	...	78	299	91
1900-1901	...	112	409	102
1901-1902	...	132	250	105

APPENDIX A.

Statement showing the visitors and receipts during the year 1901-1902.

SUNDAYS.						WEEK DAYS.		TOTALS.	
Number of visitors at 1 anna.	Amount of receipts at 1 anna.	Number of visitors at 4 annas.	Amount of receipts at 4 annas.	Number of visitors at 1 rupee.	Amount of receipts at 1 rupee.	Number of visitors at 1 anna.	Amount of receipts at 1 anna.	Total number of visitors.	Total receipts.
1	2	3	4	5	6	7	8	9	10
	Rs. A. P.		Rs. A.		Rs. A.		Rs. A.		Rs. A.
11,979	749 1 0	5,251	1,313 0	1,957	1,957 0	163,123	10,223 3	182,310	14,242 4

APPENDIX B.

Comparative Statement of receipts for 1900-1901 and 1901-1902.

	Receipts for—					
	1900-1901.			1901-1902.		
1	2			3		
	Rs.	A.	P.	Rs.	A.	P.
Opening balance	6,288	8	1	5,607	6	11
Interest	163	3	4	163	3	4
Donations and subscriptions	17,588	0	0	20,691	0	0
Entrance receipts	12,145	8	0	14,242	4	0
Rents	2,400	0	0	2,000	0	0
Carriages	472	0	0	521	0	0
Fishing	256	0	0	193	0	0
Miscellaneous	2,578	14	3	3,329	7	2
Government contribution	20,000	0	0	*30,500	0	0
	61,892	1	8	77,247	5	5

*(1) Rs. 20,000 on account of the annual grant.
(2) Rs. 10,000 for special grant on account of repairing houses and improving the garden.
(3) Rs. 500 for cleaning the Garden tanks.

APPENDIX C.

Comparative statement of expenditure in 1900-1901 and 1901-1902.

	1900-1901.			1901-1902.		
1	2			3		
	Rs.	A.	P.	Rs.	A.	P.
Establishment	13,384	11	3	13,041	14	1
Food of animals	13,116	5	6	14,372	3	6
Purchase of animals	2,987	9	0	2,346	2	0
Transport of ditto	384	12	3	1,379	4	0
Contingencies	251	2	3	221	5	0
Miscellaneous contingencies	2,392	13	6	2,472	8	4
Repairs of roads	1,145	3	0	3,590	9	3
Do. of buildings	9,083	6	3	15,059	4	3
Building (original construction)	11,521	0	0	15,493	14	3
General construction	379	4	6	170	1	0
Garden ditto	1,280	10	3	4,213	10	9
Tools and plant	274	3	0	99	11	9
	56,201	0	9	72,460	8	2
Closing balance	5,607	6	11	4,671	14	3
	61,808	7	8	77,132	6	5

Zoological Garden,
28th Nov. 1902.

R. H. WHITWELL, M.B., Lt.-Col., I.M.S.,
for *Honorary Secretary.*

No. 4602, dated Calcutta, the 15th December 1902.

From—W. C. MACPHERSON, Esq., Offg. Secy. to the Govt. of Bengal, Revenue Dept.,
To—The Honorary Secretary, Zoological Gardens, Calcutta.

I AM directed to acknowledge the receipt of the Report for the year 1901-1902 of the Honorary Committee for the Management of the Zoological Gardens, Calcutta, submitted with your letter No. 373, dated the 29th November 1902, and to convey the thanks of the Acting Lieutenant-Governor to the Committee for their management of the Gardens.

2. Mr. Bourdillon also notices with pleasure the liberal donations of Rs. 10,000, Rs. 4,000 and Rs. 3,600 made to the Gardens by Maharaja Surya Kanta Acharya of Mymensingh, Rai Bahadur Camaleshwari Prasad Singh of Monghyr, and the Burdwan Raj Estate, respectively.

3. I am to say that there appear to be some small discrepancies of figures in Appendix A to the Report, and am to suggest that in future reports such discrepancies may be explained in a footnote to the table.

FINAL FORECAST OF THE BHADOI CROPS OF BENGAL, 1902.

THE following Note is published for general information.

W. C. MACPHERSON,
Offg. Secy. to the Govt. of Bengal.

The 10th December 1902.

DEPARTMENT OF LAND RECORDS AND AGRICULTURE, BENGAL.

Final Forecast of the Bhadoi Crops of Bengal, 1902.

Explanatory.—This note furnishes estimates of the area and outturn of all descriptions of *bhadoi* crops, except jute, indigo, cotton and *bhadoi til*, which form the chief *bhadoi* non-food crops of the Province. Separate forecasts of jute, indigo and cotton are issued by this Department, and *bhadoi til* is included in the report on oil-seed crops. This report therefore deals mainly with the *bhadoi* food-crops, of which the most important are *bhadoi* paddy, Indian-corn and millets. These three together make up more than four-fifths of the total area under all the *bhadoi* food-crops. *Bhadoi* paddy is chiefly grown in Bengal and Orissa, and occupies 60 per cent. of the total *bhadoi* food-crop area of the Province. Maize and millets predominate in Bihar and occupy 26 per cent. of this area.

The character of the season.—The rainfall in March and April exceeded the normal almost throughout the Province, and in May also there was fair rain everywhere, except in a few districts of Bihar and Chota Nagpur. The monsoon broke late in June, and the fall in that month was seriously in defect in the Patna and Chota Nagpur Divisions; while, on the other hand, in North and Eastern Bengal, it was excessive, thus aggravating the injury caused by the abnormally heavy ante-monsoon showers. July was a seasonable month, but in August the fall was again deficient, except in North and East Bengal, while floods at the end of the month caused much damage in the Muzaffarpur and Darbhanga districts. In the following month, however, there was copious and general rain in Bihar and Chota Nagpur, and in North Bengal the fall was greatly above the normal, while elsewhere it was, on the whole, slightly in defect. October was abnormally dry almost everywhere and November has been literally rainless, and, on the whole, the season has not been quite favourable to the *bhadoi* crops.

Area sown.—Excluding the areas cultivated with jute, indigo, cotton and *bhadoi til*, the normal area under the different *bhadoi* crops in this Province amounts, according to the

district returns which are summarised in Appendix I, to 13,007,100 acres, against 12,978,000 acres reported last year. The increase is due to the revised estimates submitted by the Deputy Commissioner of Ranchi after careful enquiry and by the District Officers of Darbhanga and the Sonthal Parganas in the light of the recent survey figures. The area actually sown this year with *bhadoi* crops is reported to be 12,559,700 acres, as compared with 12,659,900 acres cultivated ast year. The area planted this year with *bhadoi* food-crops s estimated at 12,075,300 acres, against 12,181,300 acres sown last year.

Character of the crop.—It will be seen from Appendix I that only twelve—(Birbhum, 24-Parganas, Rajshahi, Darjeeling, Bogra, Dacca, Champaran, Malda, Balasore, Hazaribagh, Manbhum, and Singhhum) out of the 45 districts in the Province, report a crop of 100 per cent. or over; in ten districts—(Nadia, Khulna, Dinajpur, Chittagong, Saran, Purnea, Sonthal Parganas, Cuttack, Puri and Ranchi) the outturn is estimated at between 90 and 99 per cent.; in nine others, the estimate varies between 80 and 89 per cent., while in the remaining 14, it varies between 59 and 79 per cent. Since the issue of the preliminary forecast in September last, prospects have improved in 11 districts; have remained unchanged in 23; and have deteriorated in 11. According to the estimates of the District Officers, the total outturn for the Province as a whole, of the various *bhadoi* crops dealt with in this forecast, will amount to only 88 per cent. of a normal crop, against 90 per cent., as finally estimated by me last year. In the first forecast of these crops, issued in September last, I anticipated a 90 per cent. crop for the entire Province, and I see no reason to change that estimate.

Gross outturn.—Except in the case of *bhadoi* paddy, it is not possible to estimate the outturn of these crops. Taking 88 per cent. as the probable outturn of the *bhadoi* paddy this year, the gross outturn of cleaned *bhadoi* rice may be estimated at 47,209,700 cwts., as compared with 47,499,700 cwts. of the past year.

C. G. H. ALLEN,
Offg. Director of the Dept. of Land Records and Agriculture, Bengal.

CALCUTTA,
The 5th December 1902.

APPENDIX I.

Final Report on the Bhadoi crops of Bengal, 1902.

DISTRICT.	Total area of district in acres.	Total area in district estimated to be under cultivation in acres.	Names of *bhadoi* crops.	Approximate normal area under each specified *bhadoi* crop in acres.	Approximate area last year (1901) under each specified *bhadoi* crop in acres.	Estimated area this year (1902) under each specified *bhadoi* crop in acres.	Taking 100 to represent the normal outturn, how much represented the outturn last year (1901)?	Taking 100 to represent the normal outturn, how much will represent this year's outturn (1902)?	Remarks by District Officers.	Remarks by the Department of Land Records and Agriculture, Bengal.
1	2	3	4	5	6	7	8	9	10	11
Burdwan ...	1,726,080	1,284,200	*Bhadoi* paddy	173,700	162,000	162,100	79	71		
			Indian-corn (maize)	3,000	3,000	3,000	100	100		
			Other *bhadoi* cereals and *bhadoi* pulses.	8,100	6,600	6,700	94	88		
			Other *bhadoi* food-crops (*e.g.*, vegetables).	2,800	2,000	2,200	83	66		
			Other *bhadoi* non-food-crops ...	10,100	10,100	10,100	95	95		
			Total ...	197,700	183,700	184,100	81	73		
Birbhum ...	1,121,920	776,300	*Bhadoi* paddy	144,100	110,000	144,000	100	100		
			Indian-corn (maize)	1,900	2,000	1,900	100	100		
			Other *bhadoi* food-crops (*e.g.*, vegetables).	1,400	1,500	1,400	100	100		
			Other *bhadoi* non-food-crops ...	2,800	2,500	2,600	100	100		
			Total ...	150,200	116,000	149,900	100	100		
Bankura ...	1,677,440	642,800	*Bhadoi* paddy	21,900	18,000	12,500	90	50	Owing to deficiency of rainfall, the outturn of *bhadoi* paddy was shorter than what was reported in the preliminary forecast.	
			Bajra	800	600	600	100	75		
			Mandua (*marua* or *ragi*) ...	1,100	900	700	100	90		
			Indian-corn (maize)	3,600	2,900	2,700	100	90		
			Other *bhadoi* cereals and *bhadoi* pulses.	8,400	8,200	7,000	90	100		
			Other *bhadoi* food-crops (*e.g.*, vegetables).	700	800	1,800	90	160		
			Other *bhadoi* non-food-crops ...	1,200	1,500	1,200	90	160		
			Total ...	37,700	32,900	26,500	94	72		

District.	Total area of district in acres.	Total area in district estimated to be under cultivation in acres.	Names of *bhadoi* crops.	Approximate normal area under each specified *bhadoi* crop in acres.	Approximate area last year (1901) under each specified *bhadoi* crop in acres.	Estimated area this year (1902) under each specified *bhadoi* crop in acres.	Taking 100 to represent the normal outturn, how much represented the outturn last year (1901)?	Taking 100 to represent the normal outturn, how much will represent this year's outturn (1902)?	Remarks by District Officers.	Remarks by the Department of Land Records and Agriculture, Bengal.
1	2	3	4	5	6	7	8	9	10	11
Midnapore ...	3,319,040	2,190,600	*Bhadoi* paddy	106,900	101,000	102,000	94	95	The outturn is below the normal on account of the scanty rainfall in June and September.	
			Bajra	6,100	5,900	5,900	80	80		
			Mandua (*marua* or *ragi*) ...	2,000	1,900	1,900	80	80		
			Indian-corn (maize)	21,200	21,100	21,100	99	99		
			Other *bhadoi* cereals and *bhadoi* pulses.	48,700	47,400	47,700	79	80		
			Other *bhadoi* food-crops (*e.g.*, vegetables).	23,300	20,000	20,500	79	80		
			Other *bhadoi* non-food-crops ...	54,300	51,300	51,600	75	75		
			Total ...	262,500	248,600	250,700	85	86		
Hooghly ...	1,087,360	468,900	*Bhadoi* paddy	46,000	43,000	42,400	77	85	Sufficient rainfall in places improved the outturn of the crop.	
			Indian-corn (maize)	100	100	100	100	90		
			Other *bhadoi* cereals and *bhadoi* pulses.	2,500	2,000	2,400	67	75		
			Other *bhadoi* food-crops (*e.g.*, vegetables).	3,000	4,500	4,300	64	86		
			Other *bhadoi* non-food-crops ...	16,700	6,900	6,900	74	77		
			Total ...	68,300	56,500	56,100	75	84		
24-Parganas ...	3,574,851	1,084,200	*Bhadoi* paddy	108,700	103,000	84,200	110	111	Owing to the cessation of rain from the close of September last the outturn of vegetable is expected to be poor in the Diamond Harbour subdivision.	
			Other *bhadoi* cereals and *bhadoi* pulses	3,000	2,400	2,900	110	100		
			Other *bhadoi* food-crops (*e.g.*, vegetables).	5,100	4,300	4,700	110	98		
			Other *bhadoi* non-food-crops ...	200	100	200	110	100		
			Total ...	117,000	109,800	92,000	110	110		

Nadia ...	1,787,633	680,500	*Bhadoi* paddy	328,900	383,300	*401,000	75	90	*The Subdivisional Officer of Kushtia has submitted revised figures on enquiry. The increase in the area is due to seasonable rainfall. The decrease in the area sown under "Indian corn" is due to the increased cultivation of *bhadoi* paddy.
			Mandua (*marua* or *ragi*) ...	300	200	300	60	90	
			Indian-corn (maize)	800	100	*100	75	90	
			Other *bhadoi* cereals and *bhadoi* pulses.	11,700	7,700	14,900	61	99	
			Other *bhadoi* food-crops (*e.g.*, vegetables).	17,700	14,600	*13,400	76	108	
			Other *bhadoi* non-food-crops ...	25,000	25,800	25,300	75	95	
			Total ...	384,400	431,700	455,000	75	91	
Murshidabad	1,373,440	985,500	*Bhadoi* paddy	229,700	216,700	216,600	68	71	
			Indian-corn (maize)	200	300	400	69	72	
			Other *bhadoi* cereals and *bhadoi* pulses.	2,200	3,500	3,500	60	60	
			Other *bhadoi* food-crops (*e.g.*, vegetables).	8,600	8,300	8,500	83	72	
			Other *bhadoi* non-food-crops ...	73,500	73,800	71,800	83	82	
			Total ...	313,200	302,600	300,800	72	74	
Jessore ...	1,872,000	1,203,000	*Bhadoi* paddy	399,700	362,600	358,700	80	71	Low estimate is owing to want of good rains in the latter part of the season.
			Other *bhadoi* cereals and *bhadoi* pulses.	16,600	12,000	12,100	43	48	
			Other *bhadoi* food-crops (*e.g.*, vegetables).	25,800	24,700	24,000	81	80	
			Other *bhadoi* non-food-crops ...	9,200	...	9,200	...	95	
			Total ...	451,300	399,300	404,000	79	71	
Khulna ...	3,103,942	870,900	*Bhadoi* paddy	56,400	63,900	63,500	75	98	
			Other *bhadoi* cereals and *bhadoi* pulses.	3,200	3,200	3,200	75	75	
			Other *bhadoi* food-crops (*e.g.*, vegetables).	3,700	5,000	4,100	100	96	
			Total ...	63,300	72,100	70,800	77	97	
Rajshahi ...	1,663,040	1,262,100	*Bhadoi* paddy	312,700	312,700	313,000	80	110	Since the submission of the first forecast nothing has happened to alter the estimate made therein.
			Indian-corn (maize)	1,100	1,100	1,000	80	125	
			Other *bhadoi* food-crops (*e.g.*, vegetables).	2,000	2,400	2,000	90	110	
			Other *bhadoi* non-food-crops ...	8,300	8,000	8,400	90	125	
			Total ...	324,100	324,200	324,400	80	110	

District.	Total area of district in acres.	Total area in district estimated to be under cultivation in acres.	Names of *bhadoi* crops.	Approximate normal area under each specified *bhadoi* crop in acres.	Approximate area last year (1901) under each specified *bhadoi* crop in acres.	Estimated area this year (1902) under each specified *bhadoi* crop in acres.	Taking 100 to represent the normal outturn, how much represented the outturn last year (1901)?	Taking 100 to represent the normal outturn, how much will represent this year's outturn (1902)?	Remarks by District Officers.	Remarks by the Department of Land Records and Agriculture, Bengal.
1	2	3	4	5	6	7	8	9	10	11
Dinajpu ...	2,526,080	1,697,600	*Bhadoi* paddy	130,700	129,000	130,000	80	95	Owing to excessive rains in September, the outturn fell short of the estimate made in the preliminary forecast.	
			Jowar	7,000	5,000	5,000	90	95		
			Mandua (*marua* or *ragi*) ...	7,000	5,000	5,000	90	90		
			Indian-corn (maize)	1,000	1,000	1,000	80	100		
			Other *bhadoi* food-crops (*e.g.*, vegetables).	500	400	500	80	100		
			Total ...	146,200	140,400	141,500	81	95		
Jalpaiguri ...	1,894,600	925,000	*Bhadoi* paddy	189,800	190,400	179,700	83	78	The figures in columns 3 and 5 have been revised. The decrease in the area and the outurn is due to early and excessive rainfall during the year.	
			Indian-corn (maize)	3,700	2,100	2,100	93	90		
			Other *bhadoi* cereals and *bhadoi* pulses.	7,100	4,300	4,400	94	91		
			Other *bhadoi* food-crops (*e.g.*, vegetables).	11,200	4,800	6,700	75	76		
			Total ...	211,600	201,600	193,900	83	78		
Darjeeling ...	744,960	148,200	*Bhadoi* paddy	7,000	6,300	7,300	84	(*a*)117	(*a*) Due to seasonable rainfall.	
			Mandua (*marua* or *ragi*) ...	7,700	5,800	5,800	100	(*a*)108		
			Indian-corn (maize)	22,200	21,700	21,700	100	100		
			Other *bhadoi* cereals and *bhadoi* pulses.	600	600	600	100	(*a*)117		
			Other *bhadoi* food-crops (*e.g.*, vegetables).	4,500	4,500	4,500	100	(*a*)117		
			Total ...	42,000	38,800	39,800	97	106		

Rangpur ...	2,235,520	1,602,700	*Bhadoi* paddy	282,500	278,080	278,000	101	81	The short outturn is due to excessive rainfall.
			Indian-corn (maize)	200	200	200	100	100	
			Other *bhadoi* cereals and *bhadoi* pulses.	70,900	76,100	76,100	100	100	
			Other *bhadoi* food-crops (*e.g.*, vegetables).	44,000	38,800	38,800	84	79	
			Total ...	397,600	393,100	393,100	99	84	
Bogra ...	869,760	660,000	*Bhadoi* paddy	75,700	92,000	95,000	95	100	The increase in area is due to seasonable rainfall this year.
			Other *bhadoi* non-food-crops ...	4,000	8,000	8,000	95	100	
			Total ...	79,700	100,000	103,000	95	100	
Pabna ...	1,176,960	882,500	*Bhadoi* paddy	126,100	138,900	131,900	100	75	Pulbul which is the principal crop under the head "Other *bhadoi* food-crops" is grown extensively in the chur and other lands. The other crops under this head are cucumber, pumpkin, &c.
			Other *bhadoi* cereals and *bhadoi* pulses.	39,400	45,000	45,000	100	100	
			Other *bhadoi* food-crops (*e.g.*, vegetables).	108,500	100,100	100,100	80	80	
			Other *bhadoi* non-food-crops ...	3,000	2,700	2,700	80	80	
			Total ...	277,000	286,700	279,700	93	81	
Dacca ...	1,780,480	1,213,500	*Bhadoi* paddy	247,100	241,500	230,500	95	100	
			Other *bhadoi* cereals and *bhadoi* pulses.	1,000	400	300	100	70	
			Other *bhadoi* food-crops (*e.g.*, vegetables).	40,000	37,600	37,400	94	110	
			Total ...	288,100	279,500	268,200	95	101	
Mymensingh ...	4,052,480	2,405,700	*Bhadoi* paddy	360,000	362,200	366,200	100	76	Outturn below normal is due to excessive rainfall and flood.
			Other *bhadoi* food-crops (*e.g.*, vegetables).	42,500	34,000	34,500	80	60	
			Total ...	402,500	396,200	400,700	98	75	

District.	Total area of district in acres.	Total area in district estimated to be under cultivation in acres.	Names of *bhadoi* crops.	Approximate normal area under each specified *bhadoi* crop in acres.	Approximate area last year (1901) under each specified *bhadoi* crop in acres.	Estimated area this year (1902) under each specified *bhadoi* crop in acres.	Taking 100 to represent the normal outturn, how much represented the outturn last year (1901)?	Taking 100 to represent the normal outturn, how much will represent this year's outturn (1902)?	Remarks by District Officers.	Remarks by the Department of Land Records and Agriculture, Bengal.
1	2	3	4	5	6	7	8	9	10	11
Faridpur ...	1,459,840	1,132,600	*Bhadoi* paddy	355,000	345,000	350,000	100	75		
			Other *bhadoi* cereals and *bhadoi* pulses.	100	100	100	100	75		
			Other *bhadoi* food-crops (*e.g.*, vegetables).	500	500	500	100	75		
			Other *bhadoi* non-food-crops ...	2,500	2,500	2,500	100	75		
			Total ...	358,100	348,100	353,100	100	75		
Backerganj ...	2,335,360	1,408,000	*Bhadoi* paddy	350,000	375,000	269,600	120	87	The normal area could not be sown on account of excessive rain at sowing time which also prejudiced the outturn. Considering the smaller area sown, the net outturn of rice will be little more than half that of last year.	
			Total ...	350,000	375,000	269,600	120	87		
Tippera ...	1,599,360	1,178,800	*Bhadoi* paddy	251,200	250,900	268,000	88	65	The increase in the area shown is due to the failure of the jute crop and the decrease in the outturn is due to unseasonable and excessive rainfall.	
			Other *bhadoi* cereals and *bhadoi* pulses.	2,100	2,000	1,900	82	60		
			Other *bhadoi* food-crops, (*e.g.*, vegetables).	2,700	2,700	2,700	89	59		
			Other *bhadoi* non-food-crops ...	17,000	17,000	17,000	100	60		
			Total ...	273,000	272,600	289,600	89	65		

Noakhali ...	1,052,870	784,800	*Bhadoi* paddy	218,200	213,200	197,200	100	80	The decrease in the area under cultivation (column 7), and estimated outturn (column 9) is due to excessive rainfall at the time of sowing.
			Other *bhadoi* cereals and *bhadoi* pulses.	2,600	2,600	2,600	80	70	
			Other *bhadoi* food-crops (*e.g.*, vegetables).	200	200	200	80	80	The decrease in the figures in column 3 is due to revision of estimates.
			Total ...	221,000	216,000	200,000	100	80	
Chittagong ...	1,294,815	559,800	*Bhadoi* paddy	92,300	70,000	70,000	100	90	
			Other *bhadoi* cereals and *bhadoi* pulses.	3,000	2,000	2,000	100	90	
			Other *bhadoi* food-crops (*e.g.*, vegetables).	18,800	10,000	10,000	100	90	
			Total ...	114,100	82,000	82,000	100	99	
Patna ...	1,332,560	1,082,100	*Bhadoi* paddy	14,200	6,400	14,100	61	67	The figures in columns 5, 6 and 7 have been revised.
			Jowar	15,500	8,600	15,400	50	78	
			Mandua (*marua* or *ragi*) ...	63,800	89,500	63,100	94	49	
			Indian-corn (maize)	114,600	102,600	117,900	73	60	
			Other *bhadoi* cereals and *bhadoi* pulses.	17,400	4,100	16,200	73	63	Insufficient rainfall accounts for the decrease in the outturn.
			Other *bhadoi* food-crops (*e.g.*, vegetables).	8,800	16,000	7,800	85	77	
			Other *bhadoi* non-food-crops ...	5,800	3,500	5,700	71	61	
			Total ...	239,500	230,100	240,200	81	59	
Gaya ...	3,015,680	2,207,500	*Bhadoi* paddy	20,000	17,400	17,000	80	70	The full normal area could not be cultivated for want of timely and sufficient rains.
			Jowar	19,600	18,500	18,500	90	100	
			Mandua (*marua* or *ragi*) ...	77,200	73,300	71,300	66	75	
			Indian-corn (maize)	63,500	61,400	59,500	78	75	
			Other *bhadoi* cereals and *bhadoi* pulses.	30,200	30,000	28,100	75	75	
			Other *bhadoi* food-crops (*e.g.*, vegetables).	3,500	3,100	3,000	68	70	
			Other *bhadoi* non-food-crops ...	1,400	2,800	2,700	92	75	
			Total ...	215,400	206,500	200,100	75	77	

District.	Total area of district in acres.	Total area in district estimated to be under cultivation in acres.	Names of *bhadoi* crops.	Approximate normal area under each specified *bhadoi* crop in acres.	Approximate area last year (1901) under each specified *bhadoi* crop in acres.	Estimated area this year (1902) under each specified *bhadoi* crop in acres.	Taking 100 to represent the normal outturn, how much represented the outturn last year (1901)?	Taking 100 to represent the normal outturn, how much will represent this year's outturn (1902)?	Remarks by District Officers.	Remarks by the Department of Land Records and Agriculture, Bengal.
1	2	3	4	5	6	7	8	9	10	11
Shahabad ...	2,798,720	1,841,800	*Bhadoi* paddy	57,500	35,200	45,700	51	84	Owing to early and favourable rain a considerable area usually sown with *bhadoi* crops has been brought under winter rice. The outturn would have been considerably larger had it not been for the very heavy rain in the latter half of July.	
			Jowar	8,200	7,000	7,100	63	88		
			Bajra	4,200	3,400	3,200	75	76		
			Mandua (*marua* or *ragi*) ...	48,600	47,600	37,800	70	86		
			Indian-corn (maize) ...	51,200	52,300	40,200	74	87		
			Other *bhadoi* cereals and *bhadoi* pulses.	17,500	16,700	14,600	70	81		
			Other *bhadoi* food-crops (*e.g.*, vegetables).	16,500	15,000	9,800	68	82		
			Other *bhadoi* non-food-crops ...	20,700	20,000	16,500	68	86		
			Total ...	224,400	196,600	174,900	67	85		
Saran	1,708,726	1,357,200	*Bhadoi* paddy	66,400	63,000	60,000	75	80		
			Jowar	5,500	6,800	7,000	75	85		
			Bajra	2,800	3,000	3,000	90	89		
			Mandua (*marua* or *ragi*) ...	40,600	60,000	57,000	100	92		
			Indian-corn (maize)	214,300	224,000	225,000	100	92		
			Other *bhadoi* cereals and *bhadoi* pulses.	45,000	47,000	50,000	90	95		
			Other *bhadoi* food-crops (*e.g.*, vegetables).	21,300	21,000	22,000	100	100		
			Other *bhadoi* non-food-crops ...	18,200	18,200	18,000	100	100		
			Total ...	414,100	442,000	442,000	95	92		

Champaran ...	2,259,840	1,447,600	*Bhadoi* paddy	223,000	223,000	223,000	90	110	The prospects of *bhadoi* crops till they were reaped were the same as at the time of the submission of the preliminary forecast.
			Jowar	6,000	6,000	6,000	100	110	
			Bajra	4,000	4,000	4,000	100	110	
			Mandua (*marua* or *ragi*) ...	18,000	18,000	18,000	90	110	
			Indian-corn (maize)	120,000	120,000	120,000	100	110	
			Other *bhadoi* cereals and *bhadoi* pulses.	135,000	135,000	135,000	99	110	
			Other *bhadoi* food-crops (*e.g.*, vegetables).	1,000	1,000	1,000	90	110	
			Other *bhadoi* non-food-crops ...	1,000	1,000	1,000	100	110	
			Total ...	508,000	508,000	508,000	93	110	
Muzaffarpur ...	1,941,254	1,627,000	*Bhadoi* paddy	109,200	109,200	109,200	50	75	
			Mandua (*marua* or *ragi*) ...	82,400	82,400	82,400	90	80	
			Indian-corn (maize)	163,800	180,200	180,200	90	75	
			Other *bhadoi* cereals and *bhadoi* pulses.	128,600	128,600	135,000	99	75	
			Other *bhadoi* food-crops (*e.g.*, vegetables).	8,300	8,300	8,300	90	80	
			Other *bhadoi* non-food crops ...	15,200	15,200	15,200	90	70	
			Total ...	507,500	523,900	530,300	82	76	
Darbhanga ...	2,142,693	1,678,000	*Bhadoi* paddy	80,800	84,500	81,600	73	66	The floods in the north of the district considerably reduced the outturn.
			Jowar	10,700	5,000	3,900	70	65	
			Bajra	500	400	500	70	68	
			Mandua (*marua* or *ragi*) ...	221,200	189,000	224,000	81	76	
			Indian-corn (maize)	87,100	94,500	91,800	75	89	
			Other *bhadoi* cereals and *bhadoi* pulses.	9,000	9,800	7,000	84	77	
			Other *bhadoi* non-food crops ...	500	500	500	77	2	
			Total ...	409,800	383,700	409,300	78	77	
Monghyr ...	2,509,440	1,582,800	*Bhadoi* paddy	58,900	40,800	37,900	67	80	
			Jowar	41,200	37,500	37,700	65	88	
			Mandua (*marua* or *ragi*) ...	40,400	50,000	52,000	43	79	
			Indian-corn (maize)	347,500	276,500	275,600	50	85	
			Other *bhadoi* cereals and *bhadoi* pulses.	30,000	44,700	30,800	50	93	
			Other *bhadoi* food-crops (*e.g.*, vegetables).	19,100	19,000	19,100	95	87	
			Other *bhadoi* non-food crops ...	14,000	25,000	24,900	70	56	
			Total ...	551,100	493,500	478,000	55	85	

District.	Total area of district in acres.	Total area in district estimated to be under cultivation in acres.	Names of *bhadoi* crops.	Approximate normal area under each specified *bhadoi* crop in acres.	Approximate area last year (1901) under each specified *bhadoi* crop in acres.	Estimated area this year (1902) under each specified *bhadoi* crop in acres.	Taking 100 to represent the normal outturn, how much represented the outturn last year (1901)?	Taking 100 to represent the normal outturn, how much will represent this year's outturn (1902)?	Remarks by District Officers.	Remarks by the Department of Land Records and Agriculture, Bengal.
1	2	3	4	5	6	7	8	9	10	11
Bhagalpur ...	2,704,640	2,097,000	*Bhadoi* paddy	317,000	316,900	316,900	79	77	Owing to short rainfall in South Bhagalpur and floods at harvest time in Madhipura subdivision the outturn was below the normal.	
			Jowar	22,000	22,000	22,000	115	100		
			Mandua (*marua* or *ragi*) ...	123,100	123,100	123,100	94	73		
			Indian-corn (maize)	242,600	242,600	242,600	107	100		
			Other *bhadoi* cereals and *bhadoi* pulses.	45,300	45,300	45,300	113	100		
			Other *bhadoi* food-crops (*e.g.*, vegetables).	2,900	2,900	2,900	93	88		
			Other *bhadoi* non-food-crops ...	26,600	26,600	26,600	113	100		
			Total ...	779,500	779,400	779,400	94	86		
Purnea ...	3,195,513	1,639,800	*Bhadoi* paddy	516,500	503,700	516,500	73	90	The figures for "other *bhadoi* cereals and pulses" and "other food crops (vegetables, &c.)" have been revised.	
			Jowar	100	100	100	100	100		
			Mandua (*marua* or *ragi*) ...	4,400	4,100	4,100	88	96		
			Indian-corn (maize)	4,000	3,900	4,500	88	100		
			Other *bhadoi* cereals and *bhadoi* pulses.	6,000	6,000	6,000	75	70		
			Other *bhadoi* food-crops (*e.g.*, vegetables).	10,000	10,000	10,000	93	92		
			Total ...	541,000	527,800	541,200	73	90		

Malda ...	1,216,000	672,800	*Bhadoi* paddy	190,000	190,000	190,000	94	100	No increase or decrease since the submission of the preliminary forecast.
			Jowar	300	300	300	100	100	
			Bajra	600	.....	500	.....	100	
			Indian-corn (maize)	17,700	17,000	16,500	87	100	
			Other *bhadoi* cereals and *bhadoi* pulses.	8,160	4,300	5,000	100	100	
			Other *bhadoi* food-crops (*e.g.*, vegetables).	2,800	2,000	2,000	87	100	
			Other *bhadoi* non-food-crops ...	7,000	6,000	6,000	87	100	
			Total ...	226,500	219,600	220,300	93	100	
Southal Parganas.	3,500,160	1,545,300	*Bhadoi* paddy	338,400	337,900	316,700	85	94	The figures have been revised in light of the survey records.
			Jowar	8,200	1,200	5,400	50	100	
			Bajra	40,500	31,100	31,000	100	108	
			Mandua (*marua* or *ragi*) ...	19,700	17,100	18,400	85	97	
			Indian-corn (maize)	171,400	168,100	153,700	98	105	Owing to seasonable rainfall the outturn is expected to be nearly normal.
			Other *bhadoi* cereals and *bhadoi* pulses.	115,300	96,600	104,900	85	100	
			Other *bhadoi* food-crops (*e.g.*, vegetables).	6,400	6,400	5,400	100	85	
			Other *bhadoi* non-food-crops ...	48,400	44,300	40,100	112	92	
			Total ...	748,300	702,700	675,600	91	98	
Cuttack ...	2,203,149	1,161,200	*Bhadoi* paddy	163,100	159,600	159,100	71	97	But or the abrupt cessation of rains at the time of maturity, we would probably have had a bumper crop.
			Mandua (*marua* or *ragi*) ...	15,100	15,000	15,100	72	92	
			Other *bhadoi* cereals and *bhadoi* pulses.	8,300	8,300	8,400	71	93	
			Other *bhadoi* food-crops (*e.g.*, vegetables).	3,000	3,000	3,000	79	95	
			Other *bhadoi* non-food-crops ...	5,500	4,300	4,300	78	94	
			Total ...	195,000	189,600	189,900	71	96	
Balasore ...	1,334,868	870,800	*Bhadoi* paddy	88,200	107,400	107,400	75	100	The increase in area and outturn is due to seasonable rains.
			Other *bhadoi* cereals and *bhadoi* pulses.	800	1,900	1,800	75	100	
			Other *bhadoi* food-crops (*e.g.*, vegetables).	600	1,100	1,100	75	100	
			Other *bhadoi* non-food-crops ...	200	200	3,300	80	100	
			Total ...	89,800	110,600	113,500	75	100	

District.	Total area of district in acres.	Total area in district estimated to be under cultivation in acres.	* Names of *bhadoi* crops.	Approximate normal area under each specified *bhadoi* crop in acres.	Approximate area last year (1901) under each specified *bhadoi* crop in acres.	Estimated area this year (1902) under each specified *bhadoi* crop in acres.	Taking 100 to represent the normal outturn, how much represented the outturn last year (1901)?	Taking 100 to represent the normal outturn, how much will represent this year's outturn (1902)?	Remarks by District Officers.	Remarks by the Department of Land Records and Agriculture, Bengal.
1	2	3	4	5	6	7	8	9	10	11
Angul ...	1,975,84	260,000	*Bhadoi* paddy	18,000	18,000	18,000	67	63		
			Mandua (*marua* or *ragi*) ...	3,000	3,000	3,100	60	79		
			Indian-corn (maize)	8,000	8,000	8,000	78	49		
			Other *bhadoi* cereals and *bhadoi* pulses.	8,200	10,000	10,000	59	73		
			Other *bhadoi* food-crops (*e.g.*, vegetables).	1,000	1,000	1,100	50	50		
			Other *bhadoi* non-food-crops ...	1,000	1,000	1,000	60	50		
			Total ...	39,200	41,000	41,200	66	63		
Puri ...	1,599,360	738,200	*Bhadoi* paddy	85,000	60,000	60,000	95	90	The low outturn in the case of *bhadoi* paddy is due to excessive rainfall at the time of growth.	
			Mandua (*marua* or *ragi*) ...	25,000	25,000	24,000	99	90		
			Indian-corn (maize)	100	100	200	100	100		
			Other *bhadoi* cereals and *bhadoi* pulses.	800	1,000	1,500	100	100		
			Other *bhadoi* food-crops (*e.g.*, vegetables).	1,300	2,000	2,500	100	100		
			Other *bhadoi* non-food-crops ...	12,000	2,500	2,500	100	100		
			Total ...	124,200	90,600	90,700	94	91		
Hazaribagh ...	4,493,440	1,703,000	*Bhadoi* paddy	73,200	73,300	73,200	86	100		
			Mandua (*marua* or *ragi*) ...	118,900	118,900	118,900	95	100		
			Indian-corn (maize)	188,200	188,200	188,200	98	100		
			Other *bhadoi* cereals and *bhadoi* pulses.	130,800	130,800	130,800	95	100		
			Other *bhadoi* food-crops (*e.g.*, vegetables).	1,200	1,200	1,200	95	100		
			Other *bhadoi* non-food-crops ...	75,100	75,100	75,100	100	100		
			Total ...	587,400	587,500	587,400	95	100		

Ranchi ...	4,569,600	1,573,300	*Bhadoi* paddy	64,950	64,200	64,900	80	90	The decrease in the outturn is due to the early cessation of rains.
			Mandua (*marua* or *ragi*) ...	20,700	20,600	20,700	80	90	
			Indian-corn (maize)	2,600	2,600	2,600	80	90	
			Other *bhadoi* cereals and *bhadoi* pulses.	40,300	40,100	40,300	80	90	
			Other *bhadoi* food-crops (*e.g.*, vegetables).	700	700	700	80	90	
			Total ...	129,200	128,200	129,200	80	90	
Palamau ...	3,139,200	627,600	*Bhadoi* paddy	30,000	33,900	25,000	90	70	
			Jowar	600	600	600	90	79	
			Bajra	2,300	2,300	2,300	90	90	Bajra is known locally as jenora and hence was never identified with Bajra.
			Mandua (*marua* or *ragi*) ...	19,700	19,000	18,000	100	80	
			Indian-corn (maize)	50,000*	35,000	45,000	100	75	* The normal area was probably habitually underestimated.
			Other *bhadoi* cereals and *bhadoi* pulses.	28,000*	17,500	24,400	95	70	
			Other *bhadoi* food-crops (*e.g.*, vegetables).	4,400	4,400	4,400	95	80	Owing to the lateness of the rainfall and the want of rain in August a smaller area than the normal was planted out. Revised figures are given from police reports and on the basis of Palamau Government Estates settlement report.
			Other *bhadoi* non-food-crops ...	5,000	6,500	5,900	95	90	
			Total ...	140,000	119,200	125,600	96	75	
Manbhum ...	2,654,080	1,410,200	*Bhadoi* paddy	174,300	150,000	130,600	125	100	
			Jowar	1,400	1,400	1,400	100	100	
			Bajra	6,100	6,700	6,500	100	90	
			Mandua (*marua* or *ragi*) ...	20,000	17,000	16,100	110	93	
			Indian-corn (maize)	90,800	75,000	99,800	120	110	Good rainfall during the season has improved the prospects of these crops.
			Other *bhadoi* cereals and *bhadoi* pulses.	107,900	107,900	109,800	120	103	
			Other *bhadoi* food-crops (*e.g.*, vegetables).	22,300	22,300	24,800	120	103	
			Other *bhadoi* non-food-crops ...	15,500	15,400	17,400	110	93	
			Total ...	438,300	395,700	388,400	121	100	
Singhbhum ...	2,526,080	838,800	*Bhadoi* paddy	263,000	270,000	261,900	75	100	
			Jowar	5,000	5,000	4,900	95	100	
			Bajra	5,000	5,000	4,900	95	100	
			Mandua (*marua* or *ragi*) ...	15,000	15,000	15,100	85	100	
			Indian-corn (maize)	39,000	40,000	39,000	100	110	
			Other *bhadoi* cereals and *bhadoi* pulses.	40,000	40,000	39,000	90	100	
			Other *bhadoi* food-crops (*e.g.*, vegetables).	1,000	1,000	1,000	90	100	
			Other *bhadoi* non-food-crops ...	300	300	300	90	100	
			Total ...	368,300	376,300	367,000	80	101	

PROVINCE.	Total area of the Province in acres.	Total area of the Province estimated to be under cultivation in acres.	Names of *bhadoi* crops.	Approximate normal area under each specified *bhadoi* crop in acres.	Approximate area last year (1901) under each specified *bhadoi* crop in acres.	Estimated area this year (1902) under each specified *bhadoi* crop in acres.	Taking 100 to represent the normal outturn, how much represented the outturn last year (1901)?	Taking 100 to represent the normal outturn, how much will represent this year's outturn (1902)?	Remarks by District Officers.	Remarks by the Department of Land Records and Agriculture, Bengal.
1	2	3	4	5	6	7	8	9	10	11
Bengal ...	97,549,988	53,990,100	*Bhadoi* paddy	7,565,700	7,431,300	7,302,000	87	87		
			Jowar	151,300	124,400	135,300	80	93		
			Bajra	72,900	62,400	63,400	96	99		
			Mandua, *marua* or *ragi*	994,900	1,000,800	995,500	85	81		
			Indian-corn (maize)	2,034,800	1,947,600	1,956,600	89	91		
			Other *bhadoi* cereals and *bhadoi* pulses.	1,183,700	1,151,700	1,169,200	91	94		
			Other *bhadoi* food-crops (*e.g.*, vegetables).	503,600	463,100	453,900	87	86		
			Other *bhadoi* non-food-crops ...	500,200	478,600	484 400	90	89		
			Total ...	13,007,100	12,659,900	12,559,700	88	90*	.....	* As estimated by this Department.

Appendix II.

Abstract statement of estimated acreage and outturn of the bhaloi paddy crop of 1902.

Province.	Acreage—							Outturn in cwt.							Remarks by the Department of Land Records and Agriculture, Bengal.
	Of current year's crop.	Of previous year's crop.	Average of five preceding years (viz., 1896 to 1900).	Average of eight preceding years (viz., 1893 to 1900).	Percentage by which column 2 exceeds (+) or falls short of (—) area in—			Estimated yield of current year, i.e., of area in column 2.	Yield of previous year, i.e., of area in column 3.	Average of five preceding years (viz., 1896 to 1900).	Average of eight preceding years (viz., 1893 to 1900).	Percentage by which column 9 exceeds (+) or falls short of (—) outturn in—			
					Column 3.	Column 4.	Column 5.					Column 10.	Column 11.	Column 12.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Bengal ...	7,362,000	7,431,300	7,522,400	7,396,100	—1·74	—2·93	—1·27	47,209,700	47,499,700	46,891,300	45,702,200	—0·61	+0·68	+3·30	The outturns in columns 9 and 10 have been calculated with reference to the area and percentage outturn and to the normal rate of yield, which has been assumed to be 10 maunds of cleaned rice to the acre.

CONSTITUTION OF A JUDGING COMMITTEE TO AWARD PRIZES TO EXHIBITORS AT THE DELHI ART EXHIBITION.

THE following is published for general information.

W. C. MACPHERSON,
Offg. Secy. to the Govt. of Bengal.

REVENUE DEPT.,
The 16th December 1902.

No. 50—32-6, dated Calcutta, the 12th December 1902.

RESOLUTION—By the Government of India, Department of Revenue and Agriculture.

THE Governor-General in Council is pleased to apppoint the following gentlemen, who have kindly intimated their willingness to undertake the task, to form a Judging Committee for the award of the prizes, medals and certificates, which will be presented to successful exhibitors and craftsmen at the forthcoming Exhibition of Indian Art Manufactures at Delhi.

President.

1. Colonel Sir Swinton Jacob, K.C.I.E., I.S.C., Superintending Engineer, Jaipur State.

Members.

2. Colonel Stuart Beatson, C.B., I.S.C., Inspector-General, Imperial Service Troops.
3. C. L. Burns, Esq., Acting Principal, Sir Jamsetjee Jeejeebhoy School of Art, Bombay.
4. Chevalier O. Ghilardi, Acting Principal, Government School of Art, Calcutta.
5. Colonel T. H. Hendley, I.M.S., C.I.E., Inspector-General of Civil Hospitals in Bengal.
6. R. D. Mackenzie, Esq.
7. The Honourable Munshi Madho Lal, Member of the Council of His Honour the Lieutenant-Governor, United Provinces.
8. Bhai Ram Singh, Vice-Principal, Mayo School of Art, Lahore.
9. E. Thurston, Esq., Superintendent, Central Museum, Madras.

Secretary.

R. E. V. Arbuthnot, Esq., I.C.S., Under-Secretary to the Government of India, Department of Revenue and Agriculture.

The Committee will assemble at Delhi on Monday, December 22nd.

WEATHER AND CROP REPORT.

For the week ending the 15th December 1902.

Burdwan.—No rain. Weather fine. Harvesting of *aman* continues. Fodder and water sufficient. Condition of cattle good. Common rice sells at 11 seers per rupee.

Birbhum.—Rainfall nil. Weather fair. Harvesting going on. *Rabi* crop doing well. Fodder and water sufficient. Common rice sells at 13½ seers per rupee.

Bankura.—No rain. Weather fair and seasonable. Harvesting of paddy going on. *Rabi* crops suffering for want of rain. Fodder and water sufficient. Common rice sells at 14 seers per rupee.

Midnapore.—No rain. Weather seasonable. Harvesting of winter rice progressing. Fodder and water sufficient. Cattle-disease reported from Keshpur and Garhbeta thanas. Common rice sells as follows:—

		Srs.	ch.	
Sadar		12	8	per rupee.
Contai		14	0	
Tamluk		11	0	
Ghatal		12	0	

Hooghly.—Rainfall nil. Weather seasonable. Prospect of standing crops fair. Fodder and water sufficient. Common rice sells as follows:—

		Srs.	ch.	
Sadar		10	0	per rupee.
Serampore		10	0	
Arambagh		10	12	

Howrah.—No rain. Weather seasonable. *Aman* paddy is being reaped. Outturn 16 annas. Sugarcane doing well. Cultivation of *rabi* crops in progress. Common rice selling at 11 seers per rupee. No cattle-disease. Fodder and water-supply sufficient.

24-Parganas.—Rainfall nil. Weather cool. State and prospects of standing crops fair. Sowing of *rabi* crops and harvesting of *aman* continues. Common rice sells at 11 seers; in Barashat at 12 seers per rupee. Condition of cattle good. Supply of fodder and water sufficient.

Nadia.—Rainfall nil. Weather cold. Sky cloudy first half of the week. Harvesting of *aman* going on. Standing crops fair, but at Chuadanga more rain required. Fodder and water sufficient. No cattle-disease reported. Common rice sells as follows:—

		Srs.	ch.	
Sadar		13	0	per rupee.
Ranaghat		12	0	
Chuadanga		13	0	
Kushtia		12	8	
Meherpur		11	5	

Murshidabad.—Rainfall nil. Weather seasonable. Harvesting of *haimanti* paddy going on. Prospect of *rabi* crops good. No cattle-disease reported from anywhere. Fodder and water sufficient. Common rice sells as follows:—

		Srs.	ch.	
Sadar		11	0	per rupee.
Kandi		15	8	
Jangipur		15	0	
Lalbagh		13	0	

Jessore.—No rain. Weather seasonable. Prospect of crops fair. Fodder and water sufficient. Cattle-disease reported from Magura police-station. Common rice sells as follows:—

		Srs.	ch.	
Sadar		12	0	per rupee.
Bangaon		12	5	
Narail		12	5	
Magura		12	12	
Jhenida		12	0	

Khulna.—Rainfall nil. Weather seasonable. Harvesting of *aman* paddy continues. Transplantation of *boro* commenced. State of rape and mustard crops favourable. Fodder and water sufficient. A few cases of cattle-disease reported from Dumuria and Paikgachha. Common rice sells as follows:—

	Srs.	ch.	
Sadar	12	12	per rupee.
Bagerhat	13	8	
Satkhira	11	8	

Rajshahi.—Prospect of standing crops good. Harvesting of *aman* and sowing of *rabi* going on. Condition of cattle good. Fodder and water sufficient. Common rice selling at 13¾ seers per rupee.

Dinajpur.—Rainfall nil. Weather seasonable. Standing crops good. No cattle-disease. Fodder and drinking water plentiful. Rice sells at 13 seers per rupee.

Jalpaiguri.—Rainfall nil. Weather seasonable. Harvesting of *haimanti* paddy going on. Trasplantation of tobacco still continues in places. Common rice sells at 11 seers a rupee. Fodder and water sufficient.

Darjeeling.—Rainfall nil. Weather seasonable. *Hills—Haimanti dhan, bara marua, jow, barley, phaphar,* and *katai dal,* doing well. Reaping of *haimanti* paddy continues. Prospects of standing crops good. Coarse rice sells as follows:—

	Srs.	ch.	
Hills	8	0	per rupee.
Terai	10	0	

Maize sells at Darjeeling at 20 seers and at Kalimpong at 24 seers per rupee.

Rangpur.—Rainfall nil. Weather seasonable. Harvesting of *aman* going on. Condition of standing crops good. Fodder and water sufficient. Common rice sells as follows:—

	Srs.	ch.	
Sadar	12	8	per rupee.
Nilphamari	11	0	
Kurigram	10	8	
Gaibanda	12	0	

Bogra.—No rain. Weather seasonable. *Rabi* sowings and harvesting of winter rice going on. Prospects good. Fodder and water sufficient. Common rice sells at 16 seers per rupee.

Pabna.—Rainfall nil. Weather cool. Prospects of standing crops fair. Fodder and water sufficient. No cattle-disease. Common rice sells at 14 seers and 11 chitaks per rupee.

Dacca.—Rainfall nil. Prospects of crops good. Weather seasonable. Fodder available. No cattle-disease. Common rice sells at 11½ seers per rupee.

Mymensingh.—Rainfall nil. Weather seasonable. The state of winter rice and rape and mustard good. *Rabi* sowings in progress. Fodder and water ample. No cattle-disease. Common rice sells as follows:—

	Srs.	ch.	
Sadar	14	0	per rupee.
Kishorganj	13	0	
Jamalpur	14	8	
Netrakona	14	14	
Tangail	12	3	

Faridpur.—No rain. Weather cold. State and prospects of crops good. Common rice sells at 12½ seers a rupee. Fodder available. No cattle-disease.

Backergunge.—Rainfall nil. Weather seasonable. Harvesting of *aman* continues. Fodder and water sufficient. Common *aman* (old) 10½ and (new) 12 seers per rupee.

Tippera.—Rainfall nil. Weather seasonable. Prospects good. Harvesting of *aman* and sowing of *rabi* continues. Fodder and water available. No cattle-disease. Common rice sells as follows:—

	Srs.	ch.	
Sadar	14	0	per rupee.
Brahmanbaria	14	8	
Chandpur	11	0	

Noakhali.—No rain. Weather seasonable. Harvesting of *aman* continues. Prospects good. No cattle-disease. Fodder and water sufficient. Common rice sells at Sadar at 13 seers and at Feni at 14 seers per rupee.

Chittagong.—No rain. Cultivation of *rabi* crop is nearly over and reaping of *aman* crop commenced. Fodder and water sufficient. Common rice sells at 13 seers per rupee.

Chittagong Hill Tracts.—Rainfall nil. Weather seasonable. Harvesting continues Slight cattle-disease in Chandraghona. Rice sells at 11 seers per rupee.

Patna.—Rainfall nil. Weather cloudy. Paddy harvesting continues. Weeding of *rabi* commenced. Sugarcane being pressed. Poppy germinated. Prospects good. No cattle-disease. Fodder and water sufficient. Common rice sells as follows:—

	Srs.	ch.	
Patna	15	8	per rupee.
Barh	16	0	
Bihar	15	0	
Dinapore	15	8	

Gaya.—Rainfall nil. Weather cloudy, latterly bright. Standing crops promising. Harvesting of paddy in progress. Fodder and water for cattle sufficient. No cattle-disease. Common rice selling at 15½ seers in the rupee.

Shahabad.—Rainfall nil. Paddy being harvested and sugarcane being pressed. Poppy doing well. Fodder and water abundant. Rice at Sadar 14 seers per rupee.

Saran.—Rainfall nil. Weather cold and cloudy. Standing crops doing well. Harvesting of paddy continues. *Rabi* crops are being irrigated. No cattle-disease. Fodder and water sufficient. Common rice sells at 16 seers and maize at 28 seers per rupee at Chapra.

Champaran.—No rain. Weather cold and cloudy. Prospects of standing crops good. Harvesting of paddy continues. *Rabi* sowings still going on in places. Poppy doing well. No cattle-disease. Fodder and water sufficient. Common rice sells at 18¼ seers, and maize at 29 seers per rupee.

Muzaffarpur.—Rainfall nil. Weather cool and cloudy at times. *Rabi* sowings nearly completed. Harvesting of winter rice continues. Prospects good. Fodder and water sufficient. Prices are—common rice 13, maize 29 seers a rupee.

Darbhanga.—Rainfall nil. Weather seasonable. Prospects of standing crops good. Harvesting of paddy in progress. Fodder and water sufficient. Cattle-disease is reported from Warisnagar thana. Common rice sells as follows:—

	Srs.	ch.	
Sadar	19	12	per rupee
Samastipur	14	0	
Madhubani	17	15	

Monghyr.—No rain. Weather cold and cloudy. Prospects of crops good. Harvesting of winter rice continues. Sugarcane pressing going on. Early sown poppy flourishing. Prospects hopeful. Fodder and water sufficient. Common rice sells as follows:—

	Srs.	ch.	
Sadar	14	8	per rupee.
Begusarai	16	0	
Jamui	12	0	

Bhagalpur.—Rainfall nil. Weather seasonable. Harvesting of winter paddy still going on. Outlook of *rabi* crop in Madhipura and Banka favourable. Cattle-disease reported from Madhipura thana. Fodder and water sufficient. Common rice sells as follows:—

	Srs.	ch.	
Sadar	15	2	per rupee.
Banka	16	7	
Madhipura	19	0	
Supaul	20	0	

Purnea.—No rain. Weather cold. Harvesting of winter rice going on briskly. Sowing of *rabi* crops over. Prospects good. No cattle-disease. Fodder and water sufficient. Common rice sells as follows:—

	Srs.	ch.	
Sadar	12	0	per rupee.
Kishanganj	12	0	
Araria	14	0	

Malda.—Rainfall nil. Weather cloudy. Harvesting of winter rice in progress. Sowing of *rabi* finished. Cattle-pox reported from thana Nawabganj. No want of fodder and water. Common rice sells at 16 seers per rupee.

Sonthal Parganas.—Rainfall nil. Weather cool and cloudy. Harvesting of winter rice in progress. Sugarcane and other standing crops doing well. Cattle-disease reported from Pakaur. Fodder and water sufficient. Common rice sells at 14 seers per rupee in Dumka.

Cuttack.—No rain. Weather seasonable. Prospects unchangeable. *Guru Sarad* being harvested. Fodder and water available. Common rice sells at Sadar at 15¾ seers per rupee.

Balasore.—Rainfall nil. Sarad being harvested. Sugarcane being pressed at places. Other crops doing well. Rice sells at 15 and 14 seers at Bhadrak and Sadar respectively. Fodder and water sufficient.

Angul.—No rain. Weather seasonable. Harvesting of paddy and crushing of sugarcane continue. Cattle-disease reported from the interior. Common rice sells at 17 and 16½ seers at Sadar and Khondmals respectively.

Puri.—Rainfall nil. Weather seasonable. Harvesting of winter rice going on. Outturn expected to be slightly below normal. Pressing of sugarcane continues at places. Miscellaneous crops doing well. More rain is wanted for the *rabi* crops. Fodder and water-supply sufficient. Common rice sells at 14 seers 7 chitaks per rupee.

Hazaribagh.—No rain. Weather cool. Harvesting of winter paddy still going on. Cattle-disease reported from two thanas. Standing crops doing well. Fodder and water sufficient. Common rice sells at 14½ seers per rupee.

Ranchi.—Rainfall nil. Weather seasonable. Reaping of *Sirguja* and *Kurthi* in progress. Threshing of paddy nearly finished. Cattle-disease reported from Ranchi and Khunti thanas. Fodder and water sufficient. Common rice sells at 17 seers per rupee.

Palamau.—No rain. Weather seasonable. Rain wanted for standing crops. Cattle-disease continues in places. Fodder and water sufficient. Rice sells at Sadar at 15¾ seers and maize 23 seers 10 chitaks per rupee.

Manbhum.—No rain. Weather cold. Prospects of crops good. Harvesting of winter rice nearly over. Fodder and water sufficient. Cattle-disease not reported. Average price of common rice at Sadar 16 seers and at Gobindpur 12¾ seers per rupee.

Singhbhum.—Rainfall nil. *Rabi* crops need rain. Price of rice 16 seers per rupee at Sadar.

General Summary.—No rain. Standing *rabi* crops need rain in the districts of Bankura, Nadia, Puri, Palamau and Singnbhum. Prospects otherwise good. Harvesting of winter rice going on. Poppy doing well. Pressing of sugarcane continues. Cattle-disease reported from 12 districts. Fodder and water sufficient. The price of common rice has fallen in 20 districts, risen in 4, and is stationary in the rest (23).

By order of the Lieutenant-Governor of Bengal,

W. C. MACPHERSON,
Offg. Secretary to the Govt. of Bengal.

REVENUE DEPARTMENT,
The 16th December 1902.

Results of the Meteorological Observations taken at the Alipore Observatory from 7th to 13th December 1902.

Month.	Date.	Maximum in sun.	Number of hours of bright sunshine.	Mean pressure barometer at 32° Fahr.	Temperature. Mean.	Temperature. Maximum.	Temperature. Range.	Temperature. Minimum.	Hygrometry. Mean wet bulb.	Hygrometry. Vapour tension.	Hygrometry. Dew point.	Hygrometry. Humidity.	Wind. Prevailing direction.	Wind. Miles recorded.	Rain.	Weather.
1902.		°		Inches.	°	°	°	°	°	Inches	°	%			Inches.	
Dec.	7th	134·9	1·2	29·976	66·3	76·2	19·0	57·2	60·7	0·458	56·4	73	NNE and N by W	68	Nil	Chiefly cloudy, o.
,,	8th	129·7	1·7	·962	68·9	77·4	16·1	61·3	61·6	·452	56·1	65	N by W and N ...	82	,,	Chiefly cloudy. o. g.
,,	9th	130·9	7·4	·940	67·1	77·5	18·5	59·0	59·3	·404	53·0	63	N and NNW ..	95	,,	Chiefly clear.
,,	10th	131·1	3·3	·932	65·9	75·4	18·3	57·1	57·3	·360	49·9	58	N by W and N ...	82	,,	Chiefly cloudy, o, g.
,,	11th	133·7	4·2	·971	67·5	76·5	16·1	60·4	57·4	·340	48·4	50	N by W and N ...	85	,,	Chiefly cloudy, o.
,,	12th	130·0	7·0	·992	64·7	76·9	23·2	53·7	57·9	·391	52·2	64	N and N by W ...	71	,,	Chiefly clear, ⌓.
,,	13th	128·5	8·1	30·020	66·4	78·0	21·9	56·1	59·3	·412	53·6	64	N by W and N ...	69	,,	Clear, ⌓.

	Inches.
The mean pressure of the seven days	29·970
The average pressure of the corresponding period for 24 years, Surveyor-General's Office	30·024
	Hours.
The total number of hours of bright sunshine	32·9
The maximum possible number of hours of sunshine	75·2
	°
The mean temperature of the seven days	66·7
The average temperature of the corresponding period for 24 years, Surveyor-General's Office	68·4
The extreme variation of temperature	24·3
The maximum temperature	78·0
	Miles.
The highest velocity of the wind in one hour	11
	%
The mean relative humidity	62
The average relative humidity of the corresponding period for 24 years, Surveyor-General's Office	71
	Inches.
The total fall of rain from 7th to 13th December 1902	Nil.
The average fall of the corresponding period for 24 years, Surveyor-General's Office	0·03
The total fall from 1st January to 13th December 1902	61·62
The average fall of the corresponding period for 24 years, Surveyor-General's Office	65·22

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, and from eye observations.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard, Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

o, overcast, g, gloomy; ⌓, dew.

G. W. KÜCHLER,
for Meteorological Reporter to the Govt. of India and Director-General of Indian Observatories.

METEOROLOGICAL OFFICE, GOVT. OF INDIA;
Alipore (Calcutta), the 15th December 1902.

Meteorological Report of the Province of

STATION OBSERVATIONS.

Meteorological Division.	Division.	District.	Representative stations.	Air Pressure. Highest, 8 A.M., barometer reading.	Air Pressure. Lowest, 8 A.M., barometer reading.	Air Pressure. Mean, 8 A.M., reduced to 32°.	Air Pressure. Mean reduced to sea-level and constant gravity, Lat. 45°.	Air Pressure. Variation from normal mean.	Wind. Mean direction at 8 A.M.	Wind. Mean velocity in miles daily.	Temperature. Highest month.	Temperature. Lowest of month.	Temperature. Mean daily maximum temperature.	Temperature. Mean daily minimum temperature.	Temperature. Mean daily temperature.	Temperature. Variation from normal mean.
South-West Bengal.	Burdwan	Burdwan	Burdwan	30·092	29·876	29·974	30·024	+·042	N18°W	19	88·2	58·6	84·0	63·6	73·8	+0·1
			Raniganj	29·842	29·628	29·731	30·031	—	N18°E	14	86·4	54·2	83·5	60·5	72·1	—0·4
		Birbhum	.....													
		Bankura	Bankura	29·860	29·656	29·758	30·019	—	Calm	22	88·1	55·8	83·5	62·2	72·8	—0·1
		Midnapore	Midnapore	30·028	29·818	29·922	30·024	+·040	N2°W	45	90·3	55·6	84·5	63·0	73·8	+0·9
		Hooghly	.....													
		Howrah	.....													
	Presidency	24-Parganas	Saugor Island	30·157	29·944	30·043	30·013	+·048	N48°E	152	86·9	59·9	83·3	(a) 66·0	(a) 74·7	+0·3
		Calcutta	Calcutta	30·166	29·952	30·057	30·025	+·053	N21°W	60	88·1	57·1	82·7	63·4	73·1	+0·1
		Nadia	Krishnagar	30·153	29·936	30·044	30·041	—	N23°W	42	87·7	53·5	83·7	61·0	72·4	—0·5
		Murshidabad	Berhampore	30·121	29·907	30·014	30·031	+·051	N14°W	22	87·2	59·7	83·7	64·7	74·2	+1·3
		Jessore	Jessore	30·136	29·936	30·030	30·011	+·045	N27°E	18	88·5	54·1	82·7	61·2	72·0	—1·6
		Khulna	.....													
North Bengal.	Rajshahi	Rajshahi	Rampur Boalia	30·107	29·897	30·009	30·030	+·062	W	11	85·1	58·1	81·5	62·8	72·2	+0·2
		Dinajpur	Dinajpur	30·048	29·840	29·957	30·041	+·051	N10°E	28	85·3	54·9	81·7	59·6	70·7	—1·1
		Jalpaiguri	Jalpaiguri	29·898	29·684	29·803	30·057	+·053	N12°E	20	82·4	53·5	80·2	59·4	69·8	—1·3
		Darjeeling	Darjeeling	23·172	22·978	23·107	—	+·007	N45°E	9	62·5	39·0	54·8	42·0	48·4	+0·1
		Cooch Behar	Cooch Behar	30·030	29·805	29·936	30·055	—	N82°E	29	83·2	53·5	80·7	60·0	70·4	—
		Rangpur	Rangpur	30·061	29·844	29·969	30·052	+·072	N68°E	(b) 42	84·7	55·3	81·3	60·5	70·9	—0·3
		Bogra	Bogra	30·096	29·933	30·002	30·018	+·056	N22°E	50	85·2	57·2	81·5	62·5	72·0	—0·2
		Pabna	Sirajganj	30·110	29·905	30·020	30·020	+·062	S72°E	15	86·3	59·0	81·7	63·9	72·8	+0·7
East Bengal.	Dacca	Dacca	Narayanganj	30·139	29·926	30·041	30·016	+·059	N29°E	36	88·1	59·8	82·9	65·8	74·4	—0·4
		Mymensingh	Mymensingh	30·092	29·890	30·000	30·012	+·039	Calm	21	86·1	58·4	81·7	63·2	72·5	—0·2
		Faridpur	Faridpur	30·128	29·915	30·026	30·021	+·062	N10°E	28	86·5	55·8	81·6	62·4	72·0	—0·9
		Backergunge	Barisal	30·118	29·925	30·026	29·985	+·036	N3°W	32	88·3	57·2	82·9	63·6	73·3	—0·7
	Chittagong	Tippera	Comilla	30·106	29·901	30·020	30·005	—	E	24	88·3	54·0	83·6	61·8	72·7	—1·3
		Noakhali	Noakhali	30·104	29·891	30·006	29·996	—	N27°E	39	88·5	54·1	83·7	61·9	72·8	—0·8
		Chittagong	Chittagong	30·059	29·873	29·972	30·010	+·056	N46°E	65	88·5	57·1	83·7	62·4	73·0	—1·4
		Chittagong Hill Tracts	.....													
Bihar.	Patna	Patna	Bankipore	30·006	29·786	29·904	30·048	+·039	S66°W	50	85·5	54·9	82·0	60·7	71·4	+0·3
		Gaya	Gaya	29·806	29·587	29·705	30·053	+·040	S27°W	69	87·7	52·3	83·3	58·9	71·1	—0·4
		Shahabad	Dehri	29·843	29·605	29·730	30·053	+·046	S21°W	73	87·1	54·7	82·7	60·2	71·5	—0·1
			Buxar	29·949	29·733	29·852	30·057	+·054	S80°W	75	88·0	51·1	83·5	58·6	71·1	+0·5
			Arrah	30·010	29·792	29·908	30·060	—	N79°W	21	86·9	51·1	82·8	56·5	69·7	—0·8
		Saran	Chapra	30·009	29·782	29·901	30·045	—	S56°W	26	87·1	52·5	82·7	57·8	70·3	—0·2
		Champaran	Motihari	29·989	29·750	29·877	30·068	—	N23°E	36	84·9	51·9	81·7	55·9	68·8	0
		Muzaffarpur	Muzaffarpur	30·017	29·796	29·916	30·056	—	S45°E	15	84·7	53·3	80·6	58·8	69·7	—
		Darbhanga	Darbhanga	30·007	29·798	29·909	30·037	+·037	N45°W	17	84·2	56·7	81·1	61·4	71·3	—0·4
		Monghyr	.....													
	Bhagalpur	Bhagalpur	Bhagalpur	30·043	29·814	29·929	30·048	+·068	E	21	86·6	52·6	82·2	59·3 (c)	70·8 (c)	+0·5
		Purnea	Purnea	30·069	29·842	29·966	30·052	+·057	N11°E	30	85·0	51·1	81·2	57·8	69·5	—1·1
		Malda	Malda	30·092	29·877	29·994	30·020	—	N3°W	1	85·9	56·0	81·8	61·8	71·8	—0·1
		Santhal Parganas	Naya Dumka	29·689	29·480	29·585	30·056	+·066	N27°W	32	85·2	53·0	81·0	59·9	70·5	0
Orissa.	Orissa	Cuttack	Cuttack	30·127	29·894	30·000	30·025	+·058	N45°W	24	93·4	56·6	86·1	64·8	75·5	—0·2
			False Point	30·162	29·949	30·052	30·015	+·052	N30°W	113	87·4	54·5	83·3	62·9	73·1	—0·9
		Balasore	Balasore	30·156	29·938	30·043	30·037	+·051	N32°W	43	89·4	53·5	84·3	61·3	72·8	—0·5
		Puri	Puri	30·161	29·943	30·053	30·016	—	N2°W	187	89·2	61·6	84·5	68·1	76·4	—
			Gopalpur	30·159	29·940	30·047	30·008	+·045	N21°W	251	88·3	56·6	84·5	65·9	75·2	+0·1
Chota Nagpur.	Chota Nagpur.	Hazaribagh	Hazaribagh	28·124	27·940	28·031	30·046	+·041	N45°W	101	82·2	51·2	75·4	58·2	68·3	+0·7
		Ranchi	Ranchi	27·994	27·808	27·901	30·040	+·035	N30°W	67	81·5	50·9	77·9	58·1	68·0	+0·3
		Palamau	Daltonganj	29·488	29·231	29·365	30·092	—	S45°E	35	86·5	45·2	82·4	52·8	67·6	—
		Manbhum	Purulia	29·341	29·124	29·239	30·033	—	N58°W	23	86·5	53·8	82·4	59·8	71·1	—
		Singhbhum	Chaibassa	29·398	29·204	29·304	30·047	+·057	N34°W	17	89·3	52·9	83·3	59·6	71·5	—0·5
Assam.	.....	Dibrugarh	Dibrugarh	29·854	29·618	29·755	30·085	—	N54°E	24	82·6	50·9	78·7	57·2	68·0	—
		Sibsagar	Sibsagar	29·861	29·638	29·781	30·088	+·051	N34°E	29	80·3	49·9	76·8	57·1	67·0	—2·0
		Tezpur	Tezpur	29·938	29·721	29·853	30·072	—	N81°E	58	81·1	54·0	77·6	59·7	68·7	—
		Kamrup	Gauhati	30·004	29·782	29·916	30·076	—	N36°E	38	85·0	52·1	80·5	58·6 (a)	69·6 (a)	—
		Goalpara	Dhubri	30·064	29·858	29·972	30·047	+·053	N76°E	96	83·1	55·8	79·8	61·1	70·5	—1·2
		Cachar	Silchar	30·073	29·855	29·978	30·038	+·059	S79°E	41	89·5	50·9	85·1	60·2	72·7	—1·6
		Khasi and Jaintia Hills.	Shillong	25·337	25·109	25·267	—	—	S49°E	41	73·6	40·0	66·8	45·2	56·0	—
			Cherrapunji	25·880	25·740	25·816	—	—	S89°E	103	73·8	49·0	67·4	53·1	60·3	—

Bengal for the month of November 1902.

HUMIDITY.		CLOUD.			DISTRICT OBSERVATIONS.										
					RAINFALL—										
					Of month.					Since 16th October 1902.					
Mean, 8 A.M.	Variation from normal mean.	Mean cloud amount, 8 A.M.	Variation from normal mean, 8 A.M.	Rainfall.	Mean of district.	Normal mean.	Variation from mean.	Number of rainy days.	Normal mean number of rainy days.	Mean of district	Normal mean.	Variation.	Mean number of rainy days.	Normal mean number of rainy days.	DISTRICT.
78	+4	1·8	—0·7	0·09	0·26	0·63	—0·37	0·40	0·72	0·94	1·86	—0·92	1·80	2·14	Burdwan.
77	—	1·0	—	0·08	0·29	0·41	—0·12	0·67	0·63	0·84	1·93	—1·09	1·84	1·96	Birbhum.
72	—	1·2	—	0·45	0·28	0·54	—0·26	0·40	0·85	0·76	1·65	—0·89	1·51	2·30	Bankura.
73	—	0·9	—	1·06	0·37	0·68	—0·31	0·71	0·75	0·80	2·43	—1·63	1·09	2·37	Midnapore.
					0·63	0·61	+0·02	1·00	0·77	0·96	2·06	—1·10	1·67	2·50	Hooghly.
					0·38	0·50	—0·12	1·00	0·77	0·86	1·72	—0·86	1·67	2·49	Howrah.
87	+4	2·2	—1·0	0·01	0·47	0·82	—0·35	0·86	1·04	1·06	2·81	—1·75	1·72	3·00	24-Parganas.
84	+5	1·4	—1·2	0·05	0·05	0·62	—0·57	0·00	0·96	2·65	1·72	+0·93	3·00	2·86	Calcutta.
84	—	1·7	—	Nil	0·32	0·74	—0·42	1·00	0·73	0·61	2·26	—1·65	2·20	2·44	Nadia.
83	+5	1·9	—0·3	0·03	0·16	0·49	—0·33	0·56	0·65	0·70	1·78	—1·08	2·19	2·05	Murshidabad.
86	+7	1·3	—1·4	0·08	0·13	0·88	—0·75	0·20	0·97	0·31	2·66	—2·35	0·80	2·90	Jessore.
					0·48	0·93	—0·45	0·80	1·06	0·71	2·94	—2·23	1·60	3·04	Khulna.
84	—	0·7	—	0·12	0·23	0·38	—0·15	0·67	0·65	0·43	1·45	—1·02	1·17	1·86	Rajshahi.
85	—	0·8	—	Nil	Nil	0·09	—0·09	0·00	0·26	0·26	0·92	—0·66	0·40	1·44	Dinajpur.
85	—	1·3	—	Nil	0·35	0·35	0	0·83	0·84	0·86	2·31	—1·45	1·63	2·34	Jalpaiguri.
73	+4	(b) 2·5	—0·6	0·55	0·41	0·32	+0·09	1·20	0·77	1·18	1·81	—0·63	2·70	2·33	Darjeeling.
86	—	0·7	—	Nil	Nil	0·12	—0·12	0·00	0·33	0·33	1·49	—1·16	1·00	1·83	Cooch Behar.
88	—	1·0	—	Nil	Nil	0·15	—0·15	0·00	9·21	0·63	1·60	—0·97	0·86	1·33	Rangpur.
85	—	1·3	—	Nil	Nil	0·55	—0·55	0·00	0·64	0·19	2·04	—1·85	0·75	1·77	Bogra.
91	—	(a) 1·8	—	Nil	0·06	0·57	—0·51	0·50	0·86	0·19	2·16	—1·97	1·00	2·75	Pabna.
85	+5	2·1	0	Nil	0·03	1·03	—1·00	0·20	1·22	0·03	2·65	—2·62	0·20	3·12	Dacca.
85	—	?	—	Nil	Nil	0·60	—0·60	0·00	0·76	0·33	2·29	—1·96	0·88	2·68	Mymensingh.
89	—	(a) 1·3	—	0·21	0·21	0·95	—0·74	0·67	1·02	0·25	2·63	—2·38	1·00	3·02	Faridpur.
85	—	1·2	—	0·45	0·26	1·05	—0·79	0·86	1·25	0·35	3·73	—3·38	1·15	3·37	Backergunge.
87	—	(b) 0·6	—	0·16	0·04	0·94	—0·90	0·22	1·26	0·23	2·83	—2·60	0·51	3·39	Tippera.
84	—	1·8	—	Nil	Nil	1·44	—1·44	0·00	1·44	Nil	4·35	—4·35	0·00	3·66	Noakhali.
87	—1	(c) 1·1	—2·2	Nil	Nil	1·29	—1·29	0·00	1·53	Nil	5·35	—5·35	0·00	4·18	Chittagong.
					Nil	1·25	—1·25	0·00	1·67	Nil	4·85	—4·85	0·00	4·38	Chittagong Hill Tracts.
73	+4	0·8	—0·7	Nil	Nil	0·19	—0·19	0·00	0·33	0·13	1·23	—1·10	0·33	1·33	Patna.
71	+8	1·7	—0·1	0·33	0·17	0·20	—0·03	0·67	0·35	0·42	0·98	—0·56	1·34	1·36	Gaya.
72	—	(a) 1·4	—	0·38											
68	—	0·8	—	0·32	0·07	0·33	—0·26	0·15	0·38	0·42	1·43	—1·01	1·06	1·38	Shahabad.
77	—	0	—	Nil											
82	—	0·7	—	0·03	0·01	0·18	—0·17	0·00	0·28	0·35	1·20	—0·55	0·67	0·90	Saran.
82	—	0	—	Nil	Nil	0·11	—0·11	0·00	0·20	0·62	0·79	—0·17	1·25	0·80	Champaran.
83	—	0	—	Nil	Nil	0·11	—0·11	0·00	0·28	0·56	0·96	—0·40	0·67	0·99	Muzaffarpur.
87	+8	0·4	—0·4	Nil	Nil	0·11	—0·11	0·00	0·21	0·38	0·84	—0·46	0·80	0·91	Darbhanga.
					0·02	0·09	—0·07	0·00	0·20	0·81	1·04	—0·23	1·00	1·10	Monghyr.
76	—	0·7	—	0·05	0·01	0·07	—0·06	0·00	0·18	0·25	0·94	—0·69	0·43	1·07	Bhagalpur.
91	+11	0	—0·9	Nil	Nil	0·07	—0·07	0·00	0·16	0·33	0·90	—0·57	0·43	0·98	Purnea.
83	—	0·8	—	Nil	0·01	0·22	—0·21	0·00	0·34	0·22	1·24	—1·02	0·25	1·15	Malda.
80	—	1·3	—	0·46	0·11	0·28	—0·17	0·29	0·46	0·78	1·49	—0·71	1·42	1·56	Sonthal Parganas.
80	+7	(a) 2·1	—0·8	Nil	0·03	1·67	—1·64	0·12	1·73	0·95	4·00	—3·05	1·83	4·41	Cuttack.
82	+1	3·4	+0·9	0·27											
74	—	1·0	—	0·09	0·10	1·01	—0·91	0·29	1·21	1·12	2·90	—1·78	2·00	3·41	Balasore.
81	—	1·5	—	0·25	0·93	1·96	—1·03	1·43	1·91	1·78	4·89	—3·11	3·06	4·91	Puri.
75	—	0·8	—	0·14											
58	+1	1·8	—0·6	0·05	0·03	0·31	—0·28	0·00	0·53	0·44	1·41	—0·97	0·67	1·75	Hazaribagh.
63	—	2·1	—	0·19	0·49	0·38	+0·11	1·17	0·59	0·81	1·21	—0·40	1·84	2·01	Ranchi.
77	—	0·9	—	0·07	0·04	0·29	—0·25	0·00	0·62	0·28	1·38	—1·10	0·50	1·73	Palamau.
88	—	1·0	—	1·40	0·55	0·31	+0·24	1·00	0·62	1·38	1·25	+0·13	2·00	1·94	Manbhum.
80	—	1·1	—	0·18	0·41	0·42	—0·01	0·83	0·66	0·42	1·37	—0·95	0·83	2·36	Singhbhum.
87	—	2·4	—	0·40											Dibrugarh.
100	+5	7·0	+4·6	0·49											Sibsagar.
91	—	2·5	—	0·03											Tezpur.
94	—	1·4	—	Nil											Kamrup.
86	0	0·7	—0·4	Nil											Goalpara.
88	+4	1·6	—2·2	0·92											Cachar.
71	—	1·1	—	0·07											Khasi and Jaintia Hills.
61	—	1·4	—	Nil											

(c) Mean of 27 days.

Table of Rainfall recorded at stations

Meteorological Division.	Division.	District.	Station.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
South-West Bengal.	Presidency.	Burdwan ...	Kalna ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Burdwan ...	...	...	0·01	0·02	0·06	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Katwa ...	...	...	0·62	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Raniganj ...	...	0·03	0·02	0·03	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...
			Mankur ...	...	...	0·52	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Birbhum ...	Suri ...	...	...	0·09	1·00	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Hetampur ...	...	...	...	0·02	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Rampur Hat ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Bolpur ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Murari ...	0·06	0·11	0·32	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Labpur ...	...	...	...	0·14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Bankura ...	Bankura ...	...	...	...	0·45	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Vishnupur ...	...	...	...	0·01	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Maliara ...	...	...	...	1·04	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Khatra ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Indas ...	...	...	...	1·02	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Kotalpur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Onda ...	...	...	...	0·08	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Gangajalghati ...	...	...	...	0·21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Raipur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Sonamukhi ...																					
		Midnapore ...	Contai ...				0·21	0·17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Tamluk ...	...	...	...	1·05	0·02	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Midnapore ...	...	...	...	0·31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Ghatal ...	...	...	...	0·06	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Kukrahaty ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Garhbeta ...	...	...	...	0·77	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Panskura ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Dantan ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Hooghly ...	Serampore ...	...	...	...	0·12	0·19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Hooghly ...	...	...	...	...	1·57	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Arambagh (Jahannabad).	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Howrah ...	Howrah ...	...	...	...	0·19	0·09	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Mohesreka ...	...	...	...	0·15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Ulubaria ...	...	...	...	0·70	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Amta ...	...	...	...	0·07	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		24-Parganas ...	Saugor Island ...	...	...	...	...	0·01	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Diamond Harbour.	...	...	...	...	0·54	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Budge-Budge	Not recorded.																				
			Canning Town ...	...	...	...	0·31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Alipore (Obsy.) ...	...	...	...	0·02	0·03	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Barrackpore ...	...	...	...	...	0·10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Dum Dum ...	...	...	...	...	0·19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Barasat ...	...	...	...	0·59	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Basirhat ..	...	...	...	..	1·56	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Nadia ...	Ranaghat ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Krishnagar ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Chuadanga ...	...	...	0·15	0·25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Meherpur ...	...	...	0·24	0·34	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Kushtia ..	...	...	0·62	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Murshidabad	Kandi ...	...	...	0·02	0·29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Berhampore ...	...	...	0·02	0·01	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Lalbagh ...	0·02	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Azimganj ...	...	0·05	0·13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Jangipur ...	...	...	0·27	0·06	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Lalgola ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Akriganj ...	...	...	0·18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Patkabari ..																					
			Dumkal ...	...	...	0·20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Jessore ...	Narail ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Jessore ...	...	...	...	0·08	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Jhenida ...	...	...	...	0·06	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Magura ...	...	...	...	0·50	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Bangaon ...																					
		Khulna ...	Satkhira ...	...	...	...	...	1·15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Bagerhat ...	...	...	...	0·39	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Khulna ...	...	...	...	0·39	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Kaliganj ...	...	...	...	0·60	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Nakipur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Dumuria ...	...	...	...	0·98	0·02	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Rampal ...	...	...	...	0·54	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Kalaroa ...	...	...	...	0·18	0·37	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Paikgacha ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Mollahat ..	...	...	...	...	0·14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Morelganj ...	...	...	...	0·62	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Tala ...	...	...	...	...	0·25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
North-Bengal.	Rajshahi.	Rajshahi ...	Boalia ...	...	0·01	0·11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Nator ...	...	...	0·13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Naugaon ...	...	...	...	0·70	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Lalpur ...	...	...	0·40	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Manda ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Mahadebpur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Dinajpur ...	*Nithpur* ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Nawabganj ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Gangarampur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Churaman ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Raiganj ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Dinajpur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Balughat ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Thakurgaon ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Setabganj ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Ramganj ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Atwari ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Birganj ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Parbatipur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

ia Bengal in Nov mber 1902.

21	22	23	24	25	26	27	28	29	30	Number of rainy days.	Average number of rainy days.	Total rainfall for the month.	Average rainfall for the month.	Heaviest rainfall during the month.	Total rainfall from 16th Oct. upvto 30th No. 1 902.	Average rainfall from 16th Oct. up to 30th Nov.	Station.	District.	Division.	Meteorological Division.
...	...	...	...	...	...	...	...	...	...	Nil	0·74	Nil	0·87	Nil	0·74	2·06	Kalna ...	Burdwan.	Burdwan.	SOUTH-WEST BENGAL.
...	...	...	...	...	...	...	...	...	...	Nil	0·81	0·09	0·64	0·06	0·67	2·24	Burdwan.			
...	...	...	...	...	...	...	...	...	...	1	0·61	0·62	0·59	0·62	1·30	2·08	Katwa.			
...	...	...	...	...	...	...	...	...	...	Nil	0·63	0·08	0·54	0·03	0·82	1·66	Raniganj.			
...	...	...	...	...	...	...	...	...	...	1	0·81	0·52	0·49	0·52	1·16	1·24	Mankur.			
...	...	...	...	...	...	...	...	...	...	1	0·63	1·09	0·37	1·60	1·96	2·82	Suri ...	Birbhum.		
...	...	...	...	...	...	...	...	...	...	Nil	0·77	0·02	0·45	0·02	0·5	1·54	Hetampur.			
...	...	...	...	...	...	...	...	...	...	Nil	0·64	Nil	0·37	Nil	0·02	1·69	Rampur Hát.			
...	...	...	...	...	...	...	...	...	...	Nil	0·81	Nil	0·67	Nil	0·29	1·58	Bolpur.			
...	...	...	...	...	...	...	...	...	...	2	0·62	0·49	0·34	0·32	0·90	1·61	Murari.			
...	...	...	...	...	...	...	...	...	...	1	0·29	0·14	0·23	0·14	0·59	2·31	Labpur.			
...	...	...	...	...	...	...	...	...	...	1	0·79	0·45	0·51	0·45	0·82	1·97	Bankura ...	Bankura.		
...	...	...	...	...	...	...	...	...	...	Nil	0·64	0·01	0·46	0 01	0·41	1·64	Vishnupur.			
...	...	...	...	...	...	...	...	...	...	1	0·75	1·04	0 26	1·04	1·85	1·49	Maliara.			
...	...	...	...	...	...	...	...	...	...	Nil	1·10	Nil	0·79	Nil	0·05	1·98	Khatra.			
...	...	...	...	...	...	...	...	...	...	1	1·00	1·02	0·46	1·02	1·51	1·29	Indas.			
...	...	...	...	...	...	...	...	...	...	Nil	0·76	Nil	0·57	Nil	Nil	1·52	Kotalpur.			
...	...	...	...	...	...	...	...	...	...	Nil	0·94	0·08	0·30	0·08	0·38	1·18	Onda.			
...	...	...	...	...	...	...	...	...	...	1	0·81	0·21	0·68	0·21	1·16	1·51	Gangajalghati.			
...	...	...	...	...	...	...	...	...	...	Nil	0·94	Nil	0·71	Nil	0 96	2·22	Raipur.			
											0·81		0·68			1·67	Sonamukhi.			
											1·16		1·32			4·96	Contai ...	Midnapore.		
...	...	...	...	...	...	...	...	...	...	2	0·71	0·38	0·52	0·21	0·38	2·42	Tamluk.			
...	...	...	...	...	...	...	...	...	...	1	1·14	1·07	0·80	1·05	1·74	2·80	Midnapore.			
...	...	...	...	...	...	...	...	...	...	1	0·63	0·31	0·54	0·31	0·31	1·34	Ghatal.			
...	...	...	...	...	...	...	...	...	...	Nil	1·07	0·06	0·83	0·06	0·12	1·83	Kukrahaty.			
...	...	...	...	...	...	...	...	...	...	Nil	0·69	Nil	0·42	Nil	Nil	1·76	Garhbeta.			
...	...	...	...	...	...	...	...	...	...	1	0·38	0·77	0·62	0·77	0·77	1·90	Panskura.			
...	...	...	...	...	...	...	...	...	...	Nil	0·25	Nil	0·35	Nil	0·56	2·41	Dantan.			
...	...	...	...	...	...	...	...	...	...	2	0·83	0·31	0·65	0·19	0·36	2·30	Serampore ...	Hooghly.		
...	...	...	...	...	...	...	...	...	...	1	0·81	1·57	0·72	1·57	2·51	2·10	Hooghly.			
...	...	...	...	...	...	...	...	...	...	Nil	0·67	Nil	0·45	Nil	Nil	1·76	*Arambagh* (Jahanabad).			
...	...	...	...	...	...	...	...	...	...	1	0·84	0·28	0·48	0·19	0·83	2·19	Howrah ...	Howrah.		
...	...	...	...	...	...	...	...	...	...	1	0·77	0·15	0·52	0·15	0·45	1·49	Mohesreka			
...	...	...	...	...	...	...	...	...	...	1	0·70	0·70	0·51	0·70	1·29	1·59	Ulubaria.			
...	...	...	...	...	...	...	...	...	...	Nil	?	0·07	?	0·07	0·78	?	*Amta*.			
...	...	...	...	...	...	...	...	...	...	Nil	1·35	0·01	1·31	0·01	1·91	5·07	Saugor Island	24-Parganas.		
...	...	...	...	...	...	...	...	...	...	1	1·10	0 54	0·79	0·54	2 61	2·61	Diamond Harbour.			
							Not recorded.			Nil	?	Nil	?	Nil	?	?	*Budge-Budge*.			
...	...	...	...	...	...	...	...	...	...	1	1·19	0·31	1 28	0·31	1·72	2·78	Canning Town.			
...	...	...	...	...	...	...	...	...	...	Nil	0·96	0·05	0 62	0·03	2·65	1·72	Alipore (Obsy).			
...	...	...	...	...	...	...	...	...	...	1	0·97	0·10	0·74	0·10	0·10	2·21	Barrackpore.			
...	...	...	...	...	...	...	...	...	...	1	0·87	0·19	0·54	0·19	0·19	2·30	Dum-Dum.			
...	...	...	...	...	...	...	...	...	...	1	0·84	0·59	0·55	0·59	0·59	2 41	Barasat.			
...	...	...	...	...	...	...	...	...	...	1	0·94	1·56	0·51	1·56	2·56	2·29	Basirhat.			
...	...	...	...	...	...	...	...	...	...	Nil	0·74	Nil	0·82	Nil	0·42	2·16	Ranaghat ...	Nadia.		
...	...	...	...	...	...	...	...	...	...	Nil	0·81	Nil	0·74	Nil	0·27	1·89	Krishnagar.			
...	...	...	...	...	...	...	...	...	...	2	0·57	0·40	0·91	0·25	0·49	2·63	Chuadanga.			
...	...	...	...	...	...	...	...	...	...	2	0·71	0·58	0·52	0·34	1·00	2·07	Meherpur.			
...	...	...	...	...	...	...	...	...	...	1	0·84	0·62	0·70	0·62	0·87	2·54	Kushtia.			
...	...	...	...	...	...	...	...	...	...	1	0·77	0·31	0·64	0·29	0·89	1·89	Kandi ...	Murshidabad.	Presidency.	
...	...	...	...	...	...	...	...	...	...	Nil	0·52	0·03	0·40	0·02	0·24	1·71	Berhampore.			
...	...	...	...	...	...	...	...	...	...	Nil	0·63	0·02	0·67	0·02	0·45	1·77	Lalbagh.			
...	...	...	...	...	...	...	...	...	...	1	0·54	0·18	0·33	0·13	0 85	1·53	Azimganj.			
...	...	...	...	...	...	...	...	...	...	1	0·52	0·33	0·30	0·27	0·61	1·59	Jangipar.			
...	...	...	...	...	...	...	...	...	...	Nil	0·57	Nil	0·46	Nil	0·78	2·07	Lalgola.			
...	...	...	...	...	...	...	...	...	...	1	0·73	0·18	0·45	0·18	1·41	1·95	Akriganj.			
											0·93		0·70			1·77	Patkabari.			
...	...	...	...	...	...	...	...	...	...	1	0·68	0·20	0·46	0·20	0·33	1·71	Dumkal.			
...	...	...	...	...	...	...	...	...	...	Nil	0·90	Nil	0·84	Nil	0·20	2·72	Narail ...	Jessore.		
...	...	...	...	...	...	...	...	...	...	Nil	1·10	0·08	1·18	0·08	0·33	3·27	Jessore.			
...	...	...	...	...	...	...	...	...	...	Nil	1·00	0·06	0·88	0·06	0·12	2·64	Jhenidah.			
...	...	...	...	...	...	...	...	...	...	1	1·00	0·50	0·88	0·50	0·50	2·32	Magura.			
...	...	...	...	...	...	...	...	...	...	Nil	0·87	Nil	0·62	Nil	0·30	2·33	Bangaon.			
...	...	...	...	...	...	...	...	...	...	1	1·13	1·15	0·66	1·15	1·33	2·33	Satkhira ...	Khulna.		
...	...	...	...	...	...	...	...	...	...	1	1·27	0·39	0·88	0·39	0·45	3·33	Bagerhat.			
...	...	...	...	...	...	...	...	...	...	1	1·07	0·30	0·72	0·30	1·02	2·57	Khulna.			
...	...	...	...	...	...	...	...	...	...	1	?	0·60	?	0·60	0·67	?	*Kaliganj*.			
...	...	...	...	...	...	...	...	...	...	Nil	1·00	Nil	1·10	Nil	Nil	3 32	Nakipur.			
...	...	...	...	...	...	...	...	...	...	1	?	1 00	?	0·18	2·14	?	*Dumuria*.			
...	...	...	...	...	...	...	...	...	...	1	0·82	0·54	1·27	0·54	0·71	3·12	Rampal.			
...	...	...	...	...	...	...	...	...	...	2	?	0·55	?	0·37	0·87	?	*Kalaroa*.			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Paikgacha*.			
...	...	...	...	...	...	...	...	...	...	1	?	0·14	?	0 14	0·30	?	*Mollahat*.			
...	...	...	...	...	...	...	...	...	...	1	?	0·62	?	0·62	0·87	?	*Morelganj*.			
...	...	...	...	...	...	...	...	...	...	1	?	0·25	?	0·25	0·82	?	*Tala*.			
...	...	...	...	...	...	...	...	...	...	1	0·68	0·12	0·31	0·11	0·36	1·75	Boalia ...	Rajshahi.	Rajshahi.	
...	...	...	...	...	...	...	...	...	...	1	0·61	0·13	0 42	0·13	0·50	1·96	Nator.			
...	...	...	...	...	...	...	...	...	...	1	0·61	0·70	0·40	0 70	0·70	1·34	Naugaon.			
...	...	...	...	...	...	...	...	...	...	1	0·69	0·40	0·53	0·40	0·49	1·43	Lalpur.			
...	...	...	...	...	...	...	...	...	...	Nil	0·69	Nil	0·31	Nil	Nil	0·98	Manda.			
...	...	...	...	...	...	...	...	...	...	Nil	0·61	Nil	0 28	Nil	0·56	1·23	Mahadebpur.			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	0·16	?	*Nithpur* ...	Dinajpur.		
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	0·20	?	*Nawabganj*.			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	0·30	?	*Gangarampur*.			
...	...	...	...	...	...	...	...	...	...	Nil	0·23	Nil	0·12	Nil	0·04	0·75	Churaman.			
...	...	...	...	...	...	...	...	...	...	Nil	0 28	Nil	0·08	Nil	Nil	0·63	Raiganj.			
...	...	...	...	...	...	...	...	...	...	Nil	0·19	Nil	0·16	Nil	0·05	1·50	Dinajpur.			
...	...	...	...	...	...	...	...	...	...	Nil	0·28	Nil	0·12	Nil	0·02	0 98	Balurghat.			
...	...	...	...	...	...	...	...	...	...	Nil	0·15	Nil	0·04	Nil	Nil	0 80	Thakurgaon			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	0·13	?	*Setabganj*.			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	0·13	?	*Ramganj*.			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	0·22	?	*Atwari*.			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	0·50	?	*Birganj*.			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	0·07	?	*Parbatipur*.			

in Bengal in November 1902—*continued.*

21	22	23	24	25	26	27	28	29	30	Number of rainy days.	Average number of rainy days.	Total rainfall for the month.	Average rainfall for the month.	Heaviest rainfall during the month.	Total rainfall from 16th Oct. up to 30th Nov. 1902.	Average rainfall from 16th Oct. up to 30th Nov.	Station.	District.	Division.	Meteorological Division.
...	...	...	...	...	...	...	...	...	...	Nil	0·32	Nil	0·15	Nil	Nil	2·32	Jalpaiguri ...	Jalpaiguri.	Rajshahi—*concluded.*	NORTH BENGAL—*concluded.*
...	...	...	...	...	...	...	...	...	...	Nil	0·40	Nil	0·27	Nil	0·09	1·39	Alipur Duar.			
...	...	...	...	...	...	...	...	...	...	Nil	0·60	Nil	0·17	Nil	0·50	0·98	Falakata.			
...	...	...	...	...	...	...	...	...	...	Nil	0·33	Nil	0·08	Nil	1·75	0·89	Debiganj.			
...	...	...	...	...	...	...	...	...	...	Nil	1·83	Nil	0·77	Nil	1·41	3·77	Bhagatpur (*Nagrakatta*)			
...	...	...	...	...	...	...	...	...	...	5	1·58	2·12	0·67	0·68	2·34	4·50	Baxa.			
0·07	...	...	...	...	...	...	...	...	...	2	?	0·44	?	0·24	0·44	?	*Kalchini.*			
...	...	...	...	...	...	...	...	...	...	Nil	0·83	Nil	0·37	Nil	0·42	1·60	Siliguri ...	Darjeeling.		
...	...	...	...	...	...	...	...	...	...	2	0·68	0·55	0·24	0·23	1·11	3·12	Darjeeling.			
...	...	...	...	...	...	...	...	...	...	1	0·67	0·33	0·37	0·32	0·76	1·12	Kalimpong.			
...	...	...	...	...	...	...	...	...	...	Nil	0·38	0·12	0·11	0·06	0·22	1·45	Mongpoo			
...	...	...	...	...	...	...	...	...	...	3	1·17	1·03	0·35	0·57	2·10	1·80	Kurseong			
											0·88		0·50			1·76	Pedong.			
...	...	...	...	...	...	...	...	...	...	Nil	0·86	Nil	0·29	Nil	0·94	1·52	Yatung ...	Tibet.		
...	...	...	...	...	...	...	...	...	...	Nil	0·45	Nil	0·19	Nil	0·84	1·52	Dinhatta ...	Cooch Behar.		
...	...	...	...	...	...	...	...	...	...	Nil	0·37	Nil	0·14	Nil	0·13	1·56	Cooch Behar			
...	...	...	...	...	...	...	...	...	...	Nil	0·18	Nil	0·05	Nil	0·37	1·41	Mickliganj.			
...	...	...	...	...	...	...	...	...	...	Nil	0·36	Nil	0·16	Nil	0·24	1·66	Matabhanga.			
...	...	...	...	...	...	...	...	...	...	Nil	0·29	Nil	0·06	Nil	0·08	1·29	Fulbari.			
...	...	...	...	...	...	...	...	...	...	Nil	0·37	Nil	0·14	Nil	Nil	1·72	Bhawaniganj (*Gaibanda*)	Rangpur.		
...	...	...	...	...	...	...	...	...	...	Nil	0·13	Nil	0·24	Nil	0·68	2·27	Rangpur.			
...	...	...	...	...	...	...	...	...	...	Nil	0·13	Nil	0·09	Nil	Nil	1·15	Peerganj.			
...	...	...	...	...	...	...	...	...	...	Nil	0·15	Nil	0·14	Nil	1·52	1·82	Kurigaon.			
...	...	...	...	...	...	...	...	...	...	Nil	0·50	Nil	0·39	Nil	2·00	1·80	Gobindganj.			
...	...	...	...	...	...	...	...	...	...	Nil	0·12	Nil	0·05	Nil	0·22	1·29	Bagdogra. (*Nilphamari*).			
...	...	...	...	...	...	...	...	...	...	Nil	0·06	Nil	0·04	Nil	Nil	0·95	Ulipur.			
...	...	...	...	...	...	...	...	...	...	Nil	0·25	Nil	0·08	Nil	?	1·75	Sunderganj.			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil		?	*Saidpur.*			
...	...	...	...	...	...	...	...	...	...	Nil	0·80	Nil	0·58	Nil	0·22	2·30	Sherpur ...	Bogra.		
...	...	...	...	...	...	...	...	...	...	Nil	0·72	Nil	0·60	Nil	0·44	2·35	Nowkhilla.			
...	...	...	...	...	...	...	...	...	...	Nil	0·58	Nil	0·82	Nil	0·09	2·23	Bogra			
...	...	...	...	...	...	...	...	...	...	Nil	0·44	Nil	0·21	Nil	Nil	1·30	Panchbibi.			
...	...	...	...	...	...	...	...	...	...	1	0·87	0·12	0·59	0·12	0·12	2·08	Pabna ...	Pabna.		
...	...	...	...	...	...	...	...	...	...	Nil	0·84	Nil	0·55	Nil	0·26	2·24	Sirajganj.			
...	...	...	...	...	...	...	...	...	...	Nil	1·38	Nil	1·08	Nil	Nil	3·00	Munshiganj ...	Dacca.	Dacca.	EAST BENGAL.
...	...	...	...	...	...	...	...	...	...	Nil	1·16	0·03	0·86	0·03	0·03	2·36	Dacca			
...	...	...	...	...	...	...	...	...	...	Nil	1·33	Nil	1·27	Nil	Nil	3·07	Narayanganj.			
...	...	...	...	...	...	...	...	...	...	1	1·03	0·10	0·98	0·10	0·10	2·54	Manikganj.			
...	...	...	...	...	...	...	...	...	...	Nil	1·[illegible]9	Nil	0·98	Nil	Nil	2·28	Jaydebpur.			
...	...	...	...	...	...	...	...	...	...	Nil	0·97	Nil	0·69	Nil	0·95	2·14	Kishorganj ...	Mymensingh.		
...	...	...	...	...	...	...	...	...	...	Nil	0·81	Nil	0·50	Nil	Nil	2·16	Atia (*Tangail*).			
...	...	...	...	...	...	...	...	...	...	Nil	0·90	Nil	0·76	Nil	0·27	2·83	Mymensingh.			
...	...	...	...	...	...	...	...	...	...	Nil	0·61	Nil	0·45	Nil	0·85	2·17	Jamalpur.			
...	...	...	...	...	...	...	...	...	...	Nil	1·00	Nil	0·66	Nil	0·54	3·23	Netrakona.			
			Not recorded.								0·75		0·75			1·89	Subarnakhali.			
...	...	...	...	...	...	...	...	...	...	Nil	0·50	Nil	0·40	Nil	Nil	1·90	Durgapur.			
...	...	...	...	...	...	...	...	...	...	Nil	0·83	Nil	0·78	Nil	Nil	2·51	Sherpur Town.			
...	...	...	...	...	...	...	...	...	...	Nil	0·44	Nil	0·44	Nil	Nil	1·78	Diwanganj.			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	0·22	?	*Nalitabari.*			
...	...	...	...	...	...	...	...	...	...	Nil	0·90	0·05	0·85	0·05	0·06	2·55	Madaripur ...	Faridpur.		
...	...	...	...	...	...	...	...	...	...	1	1·23	0·21	1·03	0·21	0·21	2·78	Faridpur.			
...	...	...	...	...	...	...	...	...	...	1	0·94	6·37	0·98	0·37	0·48	2·57	Goalundo.			
...	...	...	...	...	...	...	...	...	...	1	1·24	0·26	1·34	0·26	0·26	3·95	Patuakhali ...	Backergunge.		
...	...	...	...	...	...	...	...	...	...	1	1·35	0·31	1·08	0·31	0·31	3·50	Pirojpur.			
...	...	...	...	...	...	...	...	...	...	1	1·32	0·40	1·02	0·40	0·57	3·39	Barisal.			
...	...	...	...	...	...	...	...	...	...	1	1·50	0·22	1·11	0·21	0·22	3·00	Gaurnadi.			
...	...	...	...	...	...	...	...	...	...	1	1·29	0·21	1·07	0·21	0·21	3·53	Bhola			
...	...	...	...	...	...	...	...	...	...	1	0·78	0·40	0·86	0·40	0·83	4·47	Daulatkhan			
...	...	...	...	...	...	...	...	...	...	Nil	1·25	Nil	0·88	Nil	0·02	4·25	Bauphal.			
...	...	...	...	...	...	...	...	...	...	1	1·48	0·19	1·12	0·19	0·19	3·29	Agartala ...	Hill Tippera.	Chittagong.	
...	...	...	...	...	...	...	...	...	...	1	1·55	0·16	1·19	0·16	1·31	3·19	Comilla ...	Tippera.		
...	...	...	...	...	...	...	...	...	...	Nil	1·30		0·88	Nil	0·15	3·02	Chandpur			
...	...	...	...	...	...	...	...	...	...	Nil	1·23	Nil	0·71	Nil	Nil	2·63	Brahmanbaria.			
...	...	...	...	...	...	...	...	...	...	Nil	1·25	Nil	1·15	Nil	Nil	3·22	Ramchandrapur.			
...	...	...	...	...	...	...	...	...	...	Nil	1·25	Nil	0·67	Nil	Nil	2·66	Nasirnagar.			
...	...	...	...	...	...	...	...	...	...	Nil	0·93	Nil	0·77	Nil	Nil	1·96	Daudkandi.			
...	...	...	...	...	...	...	...	...	...	Nil	1·13	Nil	1·09	Nil	Nil	2·93	Kasba.			
...	...	...	...	...	...	...	...	...	...	Nil	1·19	Nil	0·87	Nil	Nil	2·59	Laksam.			
...	...	...	...	...	...	...	...	...	...	Nil	1·39	Nil	1·61	Nil	Nil	4·47	Noakhali ...	Noakhali.		
...	...	...	...	...	...	...	...	...	...	Nil	1·80	Nil	2·02	Nil	Nil	4·31	Fenny.			
...	...	...	...	...	...	...	...	...	...	Nil	1·31	Nil	1·08	Nil	Nil	5·47	Harishpur.			
...	...	...	...	...	...	...	...	...	...	Nil	1·25	Nil	1·03	Nil	Nil	3·14	Ramganj.			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Chhagalnaya.*			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	0·15	?	*Hatya.*			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil		?	*Lakhmipur.*			
...	...	...	...	...	...	...	...	...	...	Nil	1·94	Nil	1·97	Nil	Nil	6·19	Cox's Bazar	Chittagong.		
...	...	...	...	...	...	...	...	...	...	Nil	1·81	Nil	1·49	Nil	Nil	4·36	Chittagong.			
...	...	...	...	...	...	...	...	...	...	Nil	1·75	Nil	2·09	Nil	Nil	6·98	Kutubdia.			
...	...	...	...	...	...	...	...	...	...	Nil	1·75	Nil	1·47	Nil	Nil	5·51	Satkania.			
...	...	...	...	...	...	...	...	...	...	Nil	1·82	Nil	1·44	Nil	Nil	4·68	Kodala.			
...	...	...	...	...	...	...	...	...	...	Nil	0·63	Nil	0·26	Nil	Nil	4·93	Fenoa.			
...	...	...	...	...	...	...	...	...	...	Nil	1·00	Nil	0·29	Nil	Nil	4·81	Mirsarai.			
...	...	...	...	...	...	...	...	...	...	Nil	1·74	Nil	1·58	Nil	Nil	4·15	Rangamati ...	Chittagong Hill Tracts.		
...	...	...	...	...	...	...	...	...	...	Nil	1·60	Nil	0·92	Nil	Nil	5·56	Bandarban.			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Barkal.*			

Table of Rainfall recorded at stations

Meteorological Division.	Division.	District.	Station.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
BIHAR.	Patna	Patna ..	Patna	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Dinapore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Bihar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Barh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Bikram ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Hilsa ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Gaya ..	Aurangabad ..	0·27	0·02	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Gaya ...	0·28	0·05	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Nawada ..	0·14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Jahanabad	0·03	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Arwal ...	0·09	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Daudnagar ...	0·37	0·05	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Sherghati ..	0·10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Rajauli ...			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Pakri Barawan	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Deo ...	0·15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Shahabad ..	Buxar ..	0·02	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Dehri ..	0·32	0·04	0·02	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Bhabhua ..	0·05	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Sasaram ..	0·32	0·03	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Arrah ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Mohanea ..																				
			Khiri ..																				
			Ageaon ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Ramnagar ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Koath ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Sikroul ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Bassowan ..			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Monaharpur	0·03	0·03	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Saran ..	Gopalganj ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Siwan ...	0·03	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Ekma ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Chapra ..	0·03	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Hathwa ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Amnour	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Basantpur ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Darauli ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Bhoreh ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Sripur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Champaran ..	Motihari ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Bettiah ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Bagaha ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Burhurwa ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Ramnagar ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Muzaffarpur..	Sitamarhi	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Muzaffarpur .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Hajipur ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Paru ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Mahua ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Shiuhar ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Pupri ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Darbhanga ...	Tajpur (Samastipur).	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Darbhanga ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Madhubani ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Bahera ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Roserha .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Bhagalpur.	Monghyr ..	Begusarai ..	0·02	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Monghyr ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Jamui ..	0·03	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Gogri ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Jamalpur	0·01	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Shaikhpura	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Chakai Bamda	0·05	0·01	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Chupreon ..	·	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Gidhour ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Khargpur ...	0·04	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Bhagalpur ..	Madhipura ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Bangaon (Syfabad).																				
			Supaul ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Pratapganj ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Bhagalpur ...	0·05	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Banka ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Colgong ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Bansil ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Purnea ...	Kishanganj ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Araria ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Purnea ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Gondwara (*Korah*).	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Barsoe ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Forbesganj ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Kaliaganj ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Malda ...	Malda ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Chanchal ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Gajol ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Sibganj ...	0·02	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Sonthal Parganas.	Rajmahal ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Godda ...	0·02	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Pakaur ..	...	...	0·14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Naya Dumka	0·03	0·08	0·35	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Deoghur ..	0·04	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Jamtara ...	0·01	...	0·13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Mohagama ...			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Nanihat ..	...	0·12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

in Bengal in November 1902—*continued.*

21	22	23	24	25	26	27	28	29	30	Number of rainy days.	Average number of rainy days.	Total rainfall for the month.	Average rainfall for the month.	Heaviest rainfall during the month.	Total rainfall from 16th Oct. up to 30th Nov. 1902.	Average rainfall from 16th Oct. up to 30th Nov.	Station.	District.	Division.	Meteorological Division.
...	...	...	...	...	...	...	...	...	...	Nil	0·32	Nil	0·20	Nil	0·64	1·41	Patna ..	Patna.	Patna.	BIHAR.
...	...	...	...	...	...	...	...	...	...	Nil	0·32	Nil	0·22	Nil	0·10	1·35	Dinapore.			
...	...	...	...	...	...	...	...	...	...	Nil	0·29	Nil	0·19	Nil	Nil	1·21	Bihar.			
...	...	...	...	...	...	...	...	...	...	Nil	0·35	Nil	0·18	Nil	Nil	1·10	Barh.			
...	...	...	...	...	...	...	...	...	...	Nil	0·33	Nil	0·30	Nil	0·05	1·28	Bikram.			
...	...	...	...	...	...	...	...	...	...	Nil	0·36	Nil	0·07	Nil	Nil	1·05	Hilsa.			
...	...	...	...	...	...	...	...	...	...	1	0·40	0·29	0·25	0·27	1·40	0·97	Aurangabad..	Gaya.		
...	...	...	...	...	...	...	...	...	...	1	0·48	0·33	0·28	0·28	0·40	1·27	Gaya.			
...	...	...	...	...	...	...	...	...	...	1	0·35	0·14	0·16	0·14	0·34	0·95	Nawada.			
...	...	...	...	...	...	...	...	...	...	Nil	0·32	0·03	0·25	0·03	0·30	1·01	Jahanabad.			
...	...	...	...	...	...	...	...	...	...	Nil	0·38	0·09	0·16	0·09	0·27	0·96	Arwal.			
...	...	...	...	...	...	...	...	...	...	1	0·38	0·42	0·26	0·37	0·69	1·03	Daudnagar.			
...	...	...	...	...	...	...	...	...	...	1	0·19	0·10	0·09	0·10	0·16	1·03	Sherghati.			
...	...	...	...	...	...	...	...	...	...		0·31		0·24			1·01	Rajauli.			
...	...	...	...	...	...	...	...	...	...	Nil	0·31	Nil	0·10	Nil	0·05	0·58	Pakri Barawan.			
...	...	...	...	...	...	...	...	...	...	1	?	0·15	?	0·15	1·00	?	*Deo.*			
...	...	...	...	...	...	...	...	...	...	Nil	0·39	0·02	0·40	0·02	0·61	1·48	Buxar ..	Shahabad.		
...	...	...	...	...	...	...	...	...	...	1	0·44	0·38	0·28	0·32	1·22	1·36	Debri			
...	...	...	...	...	...	...	...	...	...	Nil	0·48	0·05	0·54	0·05	0·05	1·54	Bhabhua.			
...	...	...	...	...	...	...	...	...	...	1	0·52	0·35	0·27	0·32	1·28	1·32	Sasaram.			
...	...	...	...	...	...	...	...	...	...	Nil	0·42	Nil	0·21	Nil	Nil	1·11	Arrah.			
											0·31		0·28			1·03	Mohanea.			
											0·33		0·16			1·17	Khiri.			
...	...	...	...	...	...	...	...	...	...	Nil	0·33	Nil	0·39	Nil	0·10	1·90	Ag·aon.			
...	...	...	...	...	...	...	...	...	...	Nil	0·22	Nil	0·21	Nil	Nil	1·20	Ramagar.			
...	...	...	...	...	...	...	...	...	...	Nil	0·33	Nil	0·43	Nil	0·19	1·40	Koath.			
...	...	...	...	...	...	...	...	...	...	Nil	0·33	Nil	0·45	Nil	Nil	1·45	Sikroul.			
...	...	...	...	...	...	...	...	...	...	Nil	0·56	Nil	0·23	Nil	0·52	1·98	Bassowan.			
...	...	...	...	...	...	...	...	...	...	Nil	0·33	0·06	0·47	0·03	0·71	1·63	Monoharpur.			
...	...	...	...	...	...	...	...	...	...	Nil	0·30	Nil	0·14	Nil	1·39	0·82	Gopalganj ...	Saran.		
...	...	...	...	...	...	...	...	...	...	Nil	0·39	0·03	0·18	0·03	0·09	1·29	Siwan.			
...	...	...	...	...	...	...	...	...	...	Nil	0·38	Nil	0·25	Nil	Nil	1·59	Ekma.			
...	...	...	...	...	...	...	...	...	...	Nil	0·39	0·03	0·25	0·03	0·03	1·09	Chapra.			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	0·38	?	*Hathwa.*			
...	...	...	...	...	...	...	...	...	...	Nil	0·25	Nil	0·14	Nil	0·90	1·62	Amnour.			
...	...	...	...	...	...	...	...	...	...	Nil	0·25	Nil	0·29	Nil	1·50	0·98	Basantpur.			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	Darauli.			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	0·40	?	*Bhoreh.*			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	0·64	?	*Sripur.*			
...	...	...	...	...	...	...	...	...	...	Nil	0·18	Nil	0·12	Nil	0·48	0·75	Motihari ...	Champaran.		
...	...	...	...	...	...	...	...	...	...	Nil	0·10	Nil	0·04	Nil	0·49	0·66	Bettiah.			
...	...	...	...	...	...	...	...	...	...	Nil	0·31	Nil	0·22	Nil	0·12	0·82	Bagaha.			
...	...	...	...	...	...	...	...	...	...	Nil	0·19	Nil	0·07	Nil	1·39	0·92	Burhurwa.			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	0·50	?	*Ramnagar.*			
...	...	...	...	...	...	...	...	...	...	Nil	0·19	Nil	0·07	Nil	1·40	0·93	Sitamarhi ...	Muzaffarpur.		
...	...	...	...	...	...	...	...	...	...	Nil	0·37	Nil	0·12	Nil	1·03	1·40	Muzaffarpur.			
...	...	...	...	...	...	...	...	...	...	Nil	0·37	Nil	0·15	Nil	0·39	1·13	Hajipur.			
...	...	...	...	...	...	...	...	...	...	Nil	0·25	Nil	0·08	Nil	0·43	0·79	Paru.			
...	...	...	...	...	...	...	...	...	...	Nil	0·38	Nil	0·15	Nil	0·52	1·16	Mahua.			
...	...	...	...	...	...	...	...	...	...	Nil	0·38	Nil	0·17	Nil	Nil	1·12	Shiuhar.			
...	...	...	...	...	...	...	...	...	...	Nil	0·00	Nil	0·00	Nil	Nil	0·15	Pupri.			
...	...	...	...	...	...	...	...	...	...	Nil	0·26	Nil	0·17	Nil	0·85	1·09	Tajpur (Samastipur).	Darbhanga.		
...	...	...	...	...	...	...	...	...	...	Nil	0·19	Nil	0·07	Nil	0·24	1·07	Darbhanga.			
...	...	...	...	...	...	...	...	...	...	Nil	0·17	Nil	0·05	Nil	0·10	0·91	Madhubani.			
...	...	...	...	...	...	...	...	...	...	Nil	0·19	Nil	0·15	Nil	Nil	0·61	Bahera			
...	...	...	...	...	...	...	...	...	...	Nil	0·25	Nil	0·12	Nil	0·70	0·54	Roserha.			
...	...	...	...	...	...	...	...	...	...	Nil	0·32	0·02	0·22	0·02	1·30	1·37	Begusarai ...	Monghyr ...	Bhagalpur.	
...	...	...	...	...	...	...	...	...	...	Nil	0·26	Nil	0·20	Nil	0·97	1·30	Monghyr.			
...	...	...	...	...	...	...	...	...	...	Nil	0·45	0·03	0·12	0·93	0·03	0·85	Jamui.			
...	...	...	...	...	...	...	...	...	...	Nil	0·19	Nil	0·04	Nil	1·88	0·48	Gogri.			
...	...	...	...	...	...	...	...	...	...	Nil	0·00	0·01	0·01	0·01	1·19	0·78	Jamalpur.			
...	...	...	...	...	...	...	...	...	...	Nil	0·06	Nil	0·08	Nil	Nil	0·98	Shaikhoura.			
...	...	...	...	...	...	...	...	...	...	Nil	0·11	0·06	0·08	0·05	0·87	1·53	Chakai Bamda.			
...	...	...	...	...	...	...	...	...	...	Nil	0·13	Nil	0·04	Nil	0·16	0·87	Chupreon.			
...	...	...	...	...	...	...	...	...	...	Nil	0·43	Nil	0·07	Nil	0·43	1·21	Gidhour.			
...	...	...	...	...	...	...	...	...	...	Nil	0·00	0·04	0·00	0·04	1·18	1·01	Khargpur.			
...	...	...	...	...	...	...	...	...	...	Nil	0·23	Nil	0·06	Nil	Nil	1·02	Madhipura ...	Bhagalpur.		
											0·17		0·04			0·91	Bangaon (Syfabad).			
...	...	...	...	...	...	...	...	...	...	Nil	0·13	Nil	0·04	Nil	Nil	0·96	Sapaul.			
...	...	...	...	...	...	...	...	...	...	Nil	0·06	Nil	0·01	Nil	Nil	0·78	Pratapganj.			
...	...	...	...	...	...	...	...	...	...	Nil	0·23	0·05	0·17	0·05	0·62	1·06	Bhagalpur.			
...	...	...	...	...	...	...	...	...	...	Nil	0·32	Nil	0·13	Nil	0·56	1·32	Banka.			
...	...	...	...	...	...	...	...	...	...	Nil	0·13	Nil	0·06	Nil	Nil	0·70	Colgong.			
...	...	...	...	...	...	...	...	...	...	Nil	0·17	Nil	0·08	Nil	0·57	0·78	Bansil.			
...	...	...	...	...	...	...	...	...	...	Nil	0·20	Nil	0·05	Nil	0·35	0·97	Kishanganj	Purnea.		
...	...	...	...	...	...	...	...	...	...	Nil	0·13	Nil	0·05	Nil	0·57	1·02	Araria.			
...	...	...	...	...	...	...	...	...	...	Nil	0·16	Nil	0·07	Nil	0·06	1·35	Purnea.			
...	...	...	...	...	...	...	...	...	...	Nil	0·25	Nil	0·22	Nil	0·04	0·76	Gondwara (*Korah*).			
...	...	...	...	...	...	...	...	...	...	Nil	0·11	Nil	0·03	Nil	Nil	0·67	Barsoe.			
...	...	...	...	...	...	...	...	...	...	Nil	0·00	Nil	Nil	Nil	1·30	0·97	Forbesganj.			
...	...	...	...	...	...	...	...	...	...	Nil	0·25	Nil	0·08	Nil	Nil	0·60	Kaliganj.			
...	...	...	...	...	...	...	...	...	...	Nil	0·39	Nil	0·22	Nil	0·82	1·84	Malda ...	Malda.		
...	...	...	...	...	...	...	...	...	...	Nil	0·20	Nil	0·15	Nil	Nil	0·69	Chanchal.			
...	...	...	...	...	...	...	...	...	...	Nil	0·19	Nil	0·08	Nil	Nil	0·64	Gajol.			
...	...	...	...	...	...	...	...	...	...	Nil	0·56	0·02	0·42	0·02	0·05	1·79	Sibganj.			
...	...	...	...	...	...	...	...	...	...	Nil	0·30	Nil	0·11	Nil	Nil	1·03	Rajmahal	Sonthal Parganas.		
...	...	...	...	...	...	...	...	...	...	Nil	0·41	0·02	0·27	0·02	0·49	1·24	Godda.			
...	...	...	...	...	...	...	...	...	...	1	0·56	0·14	0·36	0·14	0·31	1·53	Pakaur.			
...	...	...	...	...	...	...	...	...	...	1	0·50	0·46	0·31	0·35	1·35	1·51	Naya Dumka.			
...	...	...	...	...	...	...	...	...	...	Nil	0·45	0·04	0·20	0·04	0·64	1·74	Deoghur.			
...	...	...	...	...	...	...	...	...	...	1	0·70	0·14	0·49	0·13	0·71	1·62	Jamtara.			
...	...	...	...	...	...	...	...	...	...		?		?			?	*Mohagama.*			
...	...	...	...	...	...	...	...	...	...	1	0·38	0·12	0·21	0·12	1·17	1·04	Nanihat.			

Table of Rainfall recorded at stations

Meteorological Division.	Division.	District.	Station.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
BIHAR—*concld.*	Bhagalpur—*concld.*	Sonthal Parganas—*concld.*	Assenboni ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Katikund ...	0·05	0·05	...	0·07	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Madhupur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Sarwan ...	0·05	0·04	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Sarath ...	...	...	0·70	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Barkope ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Bhagya ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Mohespore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Hiranpur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Barharwa ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Sahibganj ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Bario ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ORISSA.	Orissa.	Cuttack ...	Jagatsingpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Banki ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Cuttack ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			False Point ...	...	...	...	...	0·22	0·05	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Kendrapara ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Jajpur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Dharmsala ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Salepur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Balasore ...	Akhyapada ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Chandbali ...	...	...	...	...	0·31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Bhadrak ...	...	...	...	...	...	0·39	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Soro ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Balasore ...	...	...	...	...	0·03	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Jellasore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Baripada ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Angul ...	Angul ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Bissipara ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Pal Lahara ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Talchar ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Dhenkanal ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Baisinga ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Baramba ...	...	...	...	...	...	0·12	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Narsingpur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Chhindipada	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Tikerpara ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Kumarkhole	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Puri ...	Puri ...	...	...	0·09	...	...	0·16	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Khurda ...								...	...	...	...	...	...	...	...	...	...	...	...	...
			Bhanpur ...	...	...	...	0·04	0·02	0·37	0·02	...	...	...	...	...	...	...	...	...	...	...	...	...
			Gop ...	...	...	...	1·92	0·75	0·06	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Satpara ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Pipli ...	...	...	...	0·17	...	0·75	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Nayagarh ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Ranpur ...	...	...	...	0·41	0·10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Kanas ...	...	...	...	0·43	1·20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
CHOTA NAGPUR.	Chota Nagpur.	Hazaribagh ...	Pachamba (*Giridih*).	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Hazaribagh ...	...	...	0·05	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Barhi ...	0·08	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Chatra ...	0·07	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Kharagdiha ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Ramgar ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Ranchi ...	Lohardaga ...	...	0·40	...	0·41	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Ranchi ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Silli ...	...	...	0·70	0·30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Palkot ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Bano ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Tamar ...	...	0·30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Kurdeg ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Chainpur ...	...	0·50	0·35	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Chota Nagpur Tributary States.	Sirguja ...	...	...	1·50	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Jashpur ...																				
			Gangpur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Palamau ...	Palamau (*Daltonganj*).	0·07	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Balumath ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Husainabad ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Garhwa ...	0·07	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Mahuadanr ...	...	0·49	0·52	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Panki ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Latehar ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Nagarutari ...	0·18	0·02	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Ranka ...	0·11	...	0·13	0·09	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Chattarpur ...	0·09	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Manbhum ...	Purulia ...	...	...	0·45	0·95	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Gobindpur ...	...	...	0·25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Raghunathpur	...	...	...	0·53	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Barabhum	...	...	0·80	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Jhalda ...	...	...	0·60	0·03	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Chas ...	...	...	0·10	0·05	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Pandra ...	...	...	0·08	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Singhbhum ...	Chaibassa ...	...	...	...	0·18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Chakradharpur	...	...	...	0·05	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Ghatsila ...	...	...	1·85	0·12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Baharagura ...	...	...	...	0·13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Gailkura ...											Not recorded.									
			Kalikapur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Monaharpur ...	...	0·10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Katbari ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Seraikilla ...	...	...	...	0·03	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Kharswan ...																				
		Orissa Tributary Mahals.	Keonjhar ...																				
			Anandpur ...																				
			Kunjabongarh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Atmalik ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Hindol ...																				

in Bengal in November 1902—*concluded.*

21	22	23	24	25	26	27	28	29	30	Number of rainy days.	Average number of rainy days.	Total rainfall for the month.	Average rainfall for the month.	Heaviest rainfall during the month.	Total rainfall from 16th Oct. up to 30th Nov. 1902.	Average rainfall from 16th Oct. up to 30th Nov.	Station.	District.	Division.	Meteorological Division.
...	...	...	...	...	...	...	...	...	...	Nil	0·67	Nil	0·49	Nil	0·69	2·02	Assenboni.	Sonthal Parganas—*concld.*	Bhagalpur—*concld.*	BIHAR—*concld.*
...	...	...	...	...	...	...	...	...	...	Nil	0·57	0·17	0·66	0·07	0·67	2·48	Katikun			
...	...	...	...	...	...	...	...	...	...	Nil	0·57		0·24			1·65	Madhupur.			
...	...	...	...	...	...	...	...	...	...	Nil	0·71	0·09	0·24	0·05	1·05	2·04	Sarwan.			
...	...	...	...	...	...	...	...	...	...	1	0·71	0·70	0·20	0·70	2·06	2·10	Sarath.			
...	...	...	...	...	...	...	...	...	...	Nil	0·29	Nil	0·21	Nil	0·57	1·43	Barkope.			
...	...	...	...	...	...	...	...	...	...	Nil	0·00	Nil	0·00	Nil	Nil	0·50	Bhagya.			
...	...	...	...	...	...	...	...	...	...	Nil	0·57	Nil	0·48	Nil	0·60	1·86	Mohespur.			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	1·03	?	*Hiranpur.*			
...	...	...	...	...	...	...	...	...	...	Nil	0·29	Nil	0·19	Nil	0·79	1·10	Barharwa.			
...	...	...	...	...	...	...	...	...	...	Nil	0·14	Nil	0·07	Nil	0·05	0·47	Sahibganj.			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	0·14	?	*Bario.*			
...	...	...	...	...	...	...	...	...	...	Nil	1·72	Nil	1·89	Nil	0·65	4·46	Jagatsingpur	Cuttack.	Orissa.	ORISSA.
...	...	...	...	...	...	...	...	...	...	Nil	1·89	Nil	1·42	Nil	0·28	3·41	Banki.			
...	...	...	...	...	...	...	...	...	...	Nil	1·71	Nil	1·36	Nil	1·07	3·72	Cuttack.			
...	...	...	...	...	...	...	...	...	...	1	2·45	0·27	2·79	0·22	1·24	6·58	False Point.			
...	...	...	...	...	...	...	...	...	...	Nil	1·83	Nil	1·79	Nil	2·29	4·46	Kendrapara.			
...	...	...	...	...	...	...	...	...	...	Nil	1·30	Nil	1·08	Nil	0·36	3·04	Jajpur.			
...	...	...	...	...	...	...	...	...	...	Nil	1·50	Nil	1·32	Nil		3·02	Dharmsala.			
...	...	...	...	...	...	...	...	...	...	Nil	1·40	Nil	1·74	Nil	0·80	3·32	Salepur.			
...	...	...	...	...	...	...	...	...	...	Nil	1·35	Nil	1·42	Nil	0·35	2·91	Akhyapada ...	Balasore.		
...	...	...	...	...	...	...	...	...	...	1	1·79	0·31	1·85	0·31	0·62	3·98	Chandbali.			
...	...	...	...	...	...	...	...	...	...	1	1·58	0·39	1·17	0·39	1·37	3·24	Bhadrak.			
...	...	...	...	...	...	...	...	...	...	Nil	1·39	Nil	0·99	Nil	2·14	3·15	Soro.			
...	...	...	...	...	...	...	...	...	...	Nil	1·48	0·03	1·19	0·03	1·83	3·67	Balasore.			
...	...	...	...	...	...	...	...	...	...	Nil	0·93	Nil	0·65	Nil	0·23	1·87	Jellasore.			
...	...	...	...	...	...	...	...	...	...	Nil	1·14	Nil	0·81	Ni	0·97	2·47	Baripada.			
...	...	...	...	...	...	...	...	...	...	Nil	1·95	Nil	1·22	Nil	Nil	2·51	Angul ...	Angul.		
...	...	...	...	...	...	...	...	...	...	Nil	1·90	Nil	0·96	Nil	2·46	2·64	Bissipara.			
...	...	...	...	...	...	...	...	...	...	Nil	0·56	Nil	0·40	Nil	Nil	1·30	Pal Lahara.			
...	...	...	...	...	...	...	...	...	...	Nil	1·55	Nil	1·06	Nil	0·41	1·85	Talchar.			
...	...	...	...	...	...	...	...	...	...	Nil	1·65	Nil	1·15	Nil	0·59	2·43	Dhenkanal.			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	0·30	?	Baisinga.			
...	...	...	...	...	...	...	...	...	...	1	1·50	0·12	1·24	0·12	1·89	3·11	*Baramba.*			
...	...	...	...	...	...	...	...	...	...	Nil	1·60	Nil	1·24	Nil	1·23	2·59	Narsingpur			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	0·43	?	*Chhendipada.*			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Tikerpara.*			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	0·50	?	*Kumarkhole.*			
...	...	...	...	...	...	...	...	...	...	1	2·45	0·25	2·77	0·16	0·83	7·79	Puri ...	Puri.		
...	...	...	...	...	...	...	...	...	...		2·03		1·77			4·48	Khurda.			
...	...	...	...	...	...	...	...	...	...	1	2·18	0·45	2·14	0·37	1·63	5·16	Bhanpur.			
...	...	...	...	...	...	...	...	...	...	2	2·31	2·73	3·77	1·92	4·26	7·02	Gop.			
...	...	...	...	...	...	...	...	...	...	Nil	2·36	Nil	1·97	Nil	0·30	4·90	Satpara.			
...	...	...	...	...	...	...	...	...	...	2	1·53	0·92	1·51	0·75	1·24	3·77	Pipli.			
...	...	...	...	...	...	...	...	...	...	Nil	1·25	Nil	1·09	Nil	1·03	3·34	Nayagarh.			
...	...	...	...	...	...	...	...	...	...	2	1·13	0·51	0·67	0·41	1·88	2·69	Ranpur.			
...	...	...	...	...	...	...	...	...	...	2	?	1·63	?	1·20	5·37	?	*Kanas.*			
...	...	...	...	...	...	...	...	...	...	Nil	0·58	Nil	0·19	Nil	0·61	1·43	Pachamba (*Giridih*).	Hazaribagh.	Chota Nagpur.	CHOTA NAGPUR.
...	...	...	...	...	...	...	...	...	...	Nil	0·65	0·05	0·30	0·05	0·60	1·48	Hazaribagh.			
...	...	...	...	...	...	...	...	...	...	Nil	0·31	0·08	0·17	0·08	0·08	1·43	Barhi.			
...	...	...	...	...	...	...	...	...	...	Nil	0·50	0·07	0·24	0·07	0·11	1·10	Chatra.			
...	...	...	...	...	...	...	...	...	...	Nil	0·50	Nil	0·33	Nil	1·25	1·24	Kharagdiha.			
...	...	...	...	...	...	...	...	...	...	Nil	0·63	Nil	0·65	Nil	Nil	1·79	Ramgar.			
...	...	...	...	...	...	...	...	...	...	2	0·71	0·81	0·46	0·41	1·30	1·69	Lohardaga	Ranchi.		
...	...	...	...	...	...	...	...	...	...	Nil	0·72	Nil	0·31	Nil	0·20	1·34	Ranchi.			
...	...	...	...	...	...	...	...	...	...	2	0·33	1·00	0·26	0·70	2·20	0·78	Silli.			
...	...	...	...	...	...	...	...	...	...	Nil	0·50	Nil	0·39	Nil	Nil	1·16	Palkot.			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Bano.*			
...	...	...	...	...	...	...	...	...	...	1	0·29	0·30	0·41	0·30	0·30	1·02	Tamar.			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Kurdeg.*			
...	...	...	...	...	...	...	...	...	...	2	1·00	0·85	0·47	0·50	0·85	1·31	Chainpur.			
...	...	...	...	...	...	...	...	...	...	1	1·05	1·50	0·55	1·50	1·50	1·34	Sirguja ...	Chota Nagpur.		
											0·74		0·41			2·41	Jashpur.			
...	...	...	...	...	...	...	...	...	...	Nil	0·84	Nil	0·69	Nil	Nil	1·53	Gangpur.			
...	...	...	...	...	...	...	...	...	...	Nil	0·68	0·07	0·35	0·07	0·14	1·29	Palamau (*Daltonganj*)	Palamau.		
...	...	...	...	...	...	...	...	...	...	Nil	0·47	Nil	0·33	Nil	0·50	1·50	Balumath.			
...	...	...	...	...	...	...	...	...	...	Nil	0·69	Nil	0·23	Nil	Nil	1·52	Husainabad.			
...	...	...	...	...	...	...	...	...	...	Nil	0·63	0·07	0·28	0·07	0·44	1·19	Garhwa.			
...	...	...	...	...	...	...	...	...	...	2	?	1·01	?	0·52	1·01	?	*Mahuadanr.*			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Panki.*			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	Nil	?	*Latehar.*			
...	...	...	...	...	...	...	...	...	...	1	?	0·20	?	0·18	1·20	?	*Nagarutari.*			
...	...	...	...	...	...	...	...	...	...	2	?	0·33	?	0·13	0·33	?	*Ranka.*			
...	...	...	...	...	...	...	...	...	...	Nil	?	0·09	?	0·09	0·16	?	*Chattarpur.*			
...	...	...	...	...	...	...	...	...	...	2	0·74	1·40	0·24	0·95	1·60	1·22	Purulia ...	Manbhum.		
...	...	...	...	...	...	...	...	...	...	1	0·48	0·25	0·21	0·25	2·84	1·26	Gobindpur.			
...	...	...	...	...	...	...	...	...	...	1	0·63	0·53	0·47	0·53	0·53	0·96	Raghunathpur.			
...	...	...	...	...	...	...	...	...	...	1	0·81	0·80	0·53	0·80	1·31	1·31	Barahabhum.			
...	...	...	...	...	...	...	...	...	...	1	0·63	0·63	0·27	0·60	0·63	1·03	Jhalda.			
...	...	...	...	...	...	...	...	...	...	1	0·50	0·15	0·32	0·10	0·95	1·13	Chas.			
...	...	...	...	...	...	...	...	...	...	Nil	0·56	0·08	0·14	0·08	1·77	1·84	Pandra.			
...	...	...	...	...	...	...	...	...	...	1	0·81	0·18	0·41	0·18	0·21	1·43	Chaibassa	Singhbhum.		
...	...	...	...	...	...	...	...	...	...	Nil	1·13	0·05	0·73	0·05	0·05	1·51	Chakradharpur			
...	...	...	...	...	...	...	...	...	...	2	0·75	1·97	0·58	1·85	1·97	1·57	Ghatsila.			
...	...	...	...	...	...	...	...	...	...	1	0·75	0·13	0·52	0·13	0·13	1·73	Baharagura.			
				not recorded.							0·38		0·27			0·96	Gailkura.			
...	...	...	...	...	...	...	...	...	...	Nil	0·50	Nil	0·22	Nil	Nil	1·90	Kalikapur.			
...	...	...	...	...	...	...	...	...	...	1	0·29	0·10	0·21	0·10	0·10	0·47	Monaharpur.			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Ni	0·02	?	*Katbari.*			
...	...	...	...	...	...	...	...	...	...	Nil	?	0·03	?	0·03	0·96	?	*Seraikilla.*			
											?		?			?	*Kharswan.*			
											1·37		0·83			2·03	Keonjhar ...	Orissa Tributary Mahals.		
											0·63		0·80			2·86	Anandpur.			
...	...	...	...	...	...	...	...	...	...	Nil	1·42	Nil	1·11	Nil	0·18	2·83	Kunjabongarh			
...	...	...	...	...	...	...	...	...	...	Nil	?	Nil	?	Nil	0·54	?	*Atmalik.*			
											?		?			?	*Hindol.*			

SUMMARY OF THE METEOROLOGICAL AND RAINFALL OBSERVATIONS TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVATIONS TAKEN IN ASSAM, FOR THE MONTH OF NOVEMBER 1902.

WEATHER during November was fine and settled over the Province and the north of the Bay, almost continuously. A few showers fell, chiefly in the western districts, during the first week. These showers being in all cases light, the total rainfall for the month was relatively much below what usually falls in November. Chota Nagpur received 91 per cent. of the normal fall, South-West Bengal 48, North Bengal 36 and the other divisions less than 30 per cent.

The cause of the light rainfall during the first week was probably connected with the disturbance which entered Madras at the end of October and caused very heavy rain in North Madras and the Circars. The depression was shallow when it crossed the coast and appeared to become stationary and fill up soon afterwards. But probably a slight residual depression recurved and entered Bengal a few days later causing the prevailing cloud and scattered showers of those days. The heaviest rainfall amounting, on an average, to a third of an inch fell in the south-western districts between the 1st and 4th, and a few light showers in the central and northern districts between the 5th and 7th.

After the slight disturbance of the first week ceased, the usual cold season conditions became established with light northerly winds, cloudless skies and an entire absence of rainfall with the exception of light showers in the Darjeeling hills between the 15th and 17th. The usual oscillations of pressure and temperature occurred; and during a considerable portion of the month pressure was in rather large excess. Owing to that excess in pressure the gradient was steeper than usual over the Province and the Bay, a probable result of which was strongish northerly winds over the north of the Bay and comparatively cool weather inland.

Towards the south of the Bay conditions were almost continuously unsettled, with strong winds and rough sea, but no definite cyclonic disturbance developed. As usually happens under such circumstances rainfall was of almost daily occurrence on the Madras Coast, and at times heavy rain fell, notably between the 17th and 21st.

The only noticeable feature in the east of the Bay was the strong winds at Diamond Island, where velocity was almost continuously above the normal for the season. This was more marked towards the end of the month, when daily average velocity was for several days over 20 miles an hour.

These strong winds in the east and the unsettled weather with rough sea in the south-west of the Bay show that squally weather was probably general over the south of the Bay and more continuous than usual.

Pressure.—The only depression which occurred during November was very slight. Its existence was shown more by the disturbed weather which it caused during the first week than by the pressure differences. The recovery of pressure which was brisk on the 3rd and 6th resulted in a considerable excess over the whole area, but greatest in Bengal Proper, and in consequence there was a steeper gradient over the Bay. This excess slowly increased till the 9th, after which a slow to moderate fall set in and by the 11th the distribution was again normal. From that date till the 16th a small defect was general and then excess again developed and continued up to the end of the month. The greatest excess during the month was ·16 inch in parts of Bengal on the 21st.

The average excess for the month was fairly uniform in different parts of the Province. It was about ·05 inch except in the west of North Bihar where it was less than ·04 inch.

The changes in the north of the bay throughout the month were similar to those at inland stations, though smaller in amount. In the south different conditions prevailed and more than one slight depression moved westward towards the Madras coast with squally weather and heavy rainfall accompanying them. These depressions were so shallow and the increase of wind force so slight that the name of storm is scarcely applicable to them.

Temperature—Was more generally below than above the normal during the month, but not by large amounts. At the beginning of the month when weather was disturbed over Bengal a small excess was almost general, but after the recovery of pressure and the steeper gradient with northerly winds temperature began falling in the north. The change extended steadily southwards over the Bay between the 5th and 9th. On the latter date mean defect was 4° in Orissa, 2° in Bengal generally, and irregular in amount on the west coast, the greatest being 4° at Nellore. About the middle of the month there was generally a small excess in the western districts and a small defect in the east; and during the latter half general defect except towards the close when higher temperature prevailed with a mean excess of about 2°.

On an average for the month mean temperature was 1°·6 below the normal in Assam and about 1° in East Bengal. In the other divisions the variation was less than half a degree.

Rainfall.—Scattered showers fell during the first week, chiefly in the south-western districts and thereafter it was rainless except for a few very light showers in the Darjeeling hills about the middle of the month.

The total fall was a third of an inch on an average in Orissa, South-West Bengal and Chota Nagpur. In North and East Bengal and Bihar it was not more than a tenth of an inch.

As in November cyclonic storms occasionally move into the north of the Bay and from there northward or north-eastward into Bengal Proper and Assam, heavy rainfall occasionally occurs in the southern and eastern districts. The normal rainfall in November is most heavy in Orissa, 1·6 inches, in East Bengal it is 1 inch and in South-West Bengal ·6 inch. As no storm of any importance occurred during the past month the rainfall was everywhere below the normal, the greatest defect being 1·3 inches in East Bengal.

The following table gives in a condensed form the rainfall information for each of the six large meteorological divisions of Bengal for the present year up to the close of November. The numbers there given, as in the case of the former months of the year, are the actual average rainfalls in each division, expressed as a percentage of the normal fall for the period, and the last column also gives the total rainfall up to the close of November, expressed in the same way:—

Meteorological Divisions.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	Actual rainfall of first eleven months of 1902 expressed as a percentage of the normal fall for the period.
South-West Bengal	Nil	2	166	250	136	57	110	89	104	38	48	95
North Bengal	11	2	261	154	112	108	112	123	162	74	36	122
East Bengal	Nil	1	85	308	127	131	129	92	111	68	6	120
Bihar	13	4	263	177	99	60	111	71	144	44	28	94
Orissa	104	1	97	218	82	58	169	102	76	19	20	91
Chota Nagpur	31	41	82	116	116	33	111	59	143	22	91	83

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the Province for the month of November 1902:—

Meteorological Divisions.	Temperature.						Rainfall—							
			Averages for month.				Of month.			Rainy days			Since 16th October 1902.	
	Highest observed during month.	Lowest observed during month.	Of highest of each day.	Of lowest of each day.	Of mean of each day.	Average mean of month above or below normal mean of month.	Average.	Normal average.	Variation.	Average number in month.	Normal average number in month.	Variation.	Average.	Normal average.
South-West Bengal	90·3	53·5	83·5	62·8	73·2	+0·1	0·31	0·64	−0·33	0·63	0·81	−0·18	0·81	2·16
North Bengal	86·3	53·5	81·2	61·2	71·3	−0·3	0·10	0·28	−0·18	0·28	0·49	−0·21	0·52	1·67
East Bengal	88·5	54·0	82·9	63·0	73·0	−0·8	0·06	1·01	−0·95	0·22	1·21	−0·99	0·17	3·43
Bihar	88·0	51·1	82·0	59·0	70·6	−0·2	0·05	0·18	−0·13	0·14	0·31	−0·17	0·49	1·15
Orissa	93·4	53·5	84·5	64·6	74·6	−0·4	0·33	1·62	−1·29	0·60	1·68	−1·08	1·27	4·02
Chota Nagpur*	89·3	45·2	80·5	57·2	68·9	+0·1	0·32	0·35	−0·03	0·63	0·61	+0·02	0·68	1·32
Assam	89·5	49·9	79·8	59·0	69·4	−1·6								

* Purulia not included.

Meteorological Office, Bengal,
The 16th December 1902.

C. Little,
Meteorological Reporter to the Govt. of Bengal.

Vital Statistics of the districts of Bengal for the month of October 1902.

Divisions.	Districts.	Population under registration.	Births. Number registered.	Births. Ratio per 1,000 of population per annum.	Deaths. Cholera. Number registered.	Cholera. Ratio per 1,000 of population per annum.	Small-pox. Number registered.	Small-pox. Ratio per 1,000 of population per annum.	Plague. Number registered.	Plague. Ratio per 1,000 of population per annum.	Fever. Number registered.	Fever. Ratio per 1,000 of population per annum.	Dysentery and Diarrhœa. Number registered.	Dysentery and Diarrhœa. Ratio per 1,000 of population per annum.	Respiratory diseases. Number registered.	Respiratory diseases. Ratio per 1,000 of population per annum.	Injury. Number registered.	Injury. Ratio per 1,000 of population per annum.	Other causes. Number registered.	Other causes. Ratio per 1,000 of population per annum.	Total of all causes. Number registered.	Total of all causes. Ratio per 1,000 of population per annum.	Average of corresponding month of previous five years. Number registered.	Average of corresponding month of previous five years. Ratio per 1,000 of population per annum.	Remarks.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Burdwan	Burdwan	1,532,475	3,710	29·04	69	·48	4	·02	...	...	3,465	27·12	82	·60	2	·01	33	·24	755	5·88	4,410	34·44	3,449	27·00	
	Birbhum	902,280	2,838	33·72	18	·12	5	·06	...	...	1,537	20·40	12	·12	...	...	24	·24	383	5·04	1,979	26·28	1,890	22·44	
	Bankura	1,116,411	3,086	33·12	1	·009	19	·12	...	...	2,548	27·36	25	·24	...	...	26	·24	522	5·52	3,141	33·72	2,901	31·48	
	Midnapore	2,780,114	5,983	25·68	625	2·64	168	·72	...	...	5,020	21·48	176	·72	...	...	74	·24	989	4·20	7,052	30·24	6,617	28·44	
	Hooghly, including Serampore.	1,049,282	2,282	26·04	519	5·88	2	·01	...	...	2,664	30·36	301	3·36	16	·12	39	·36	552	6·24	4,093	46·80	3,227	36·84	
	Howrah	850,514	2,235	31·44	233	3·24	23	·24	...	...	1,149	16·20	332	4·92	9	·12	39	·48	608	8·52	2,412	33·96	2,453	34·56	
	24-Parganas	2,078,359	5,209	30·00	145	·72	31	·12	...	...	3,227	18·60	180	·96	5	·01	95	·48	696	3·96	4,379	25·20	4,132	23·76	
Presidency	Calcutta	847,796	1,184	16·68	74	·96	2	·02	34	·48	533	7·44	228	3·12	291	4·08	45	·60	754	10·56	1,961	27·72	2,141	30·24	
	Nadia	1,667,491	6,335	44·76	95	·60	...	...	...	...	7,708	55·44	16	·10	...	...	67	·48	696	4·92	8,572	61·68	5,832	41·88	
	Murshidabad	1,333,184	5,383	48·36	269	2·40	...	...	...	...	4,648	41·76	4	·03	1	·008	40	·36	712	6·36	5,674	51·00	5,156	46·56	
	Jessore	1,813,155	4,694	30·96	197	1·20	...	...	...	...	5,865	38·76	7	·03	...	...	74	·48	408	2·64	6,551	43·32	6,389	42·24	
	Khulna	1,253,043	5,012	47·88	76	·72	...	...	...	...	2,601	24·84	16	·72	1	·008	45	·36	948	9·00	3,687	35·28	3,981	38·04	
	Rajshahi	1,462,407	5,696	46·68	32	·24	2	·01	...	...	3,776	30·96	6	·04	4	·02	75	·60	386	3·12	4,281	35·04	5,114	41·88	
	Dinajpur	1,567,080	5,897	45·12	1	·007	1	·007	...	...	4,660	35·64	8	·06	2	·01	56	·36	333	2·52	5,061	38·64	5,419	41·40	
Rajshahi	Jalpaiguri	787,380	2,635	40·08	1	·01	7	·09	...	...	2,060	31·32	68	1·32	...	...	21	·24	52	·72	2,209	33·60	1,977	30·12	
	Darjeeling	249,117	710	34·20	...	...	...	...	...	...	579	27·84	57	2·64	1	·04	4	·12	114	5·40	755	36·36	792	38·04	
	Rangpur	2,154,181	7,340	45·56	7	·03	13	·07	...	...	5,422	30·12	8	·03	...	...	33	·12	322	1·68	5,805	32·28	5,692	31·68	
	Bogra	854,533	3,195	44·76	21	·24	6	·08	...	...	1,771	24·84	2	·02	...	...	33	·36	391	5·40	2,224	31·20	2,362	33·12	
	Pabna	1,420,461	3,252	27·36	145	1·20	5	·03	...	...	3,443	29·04	20	·12	...	...	30	·24	133	1·08	3,778	31·80	4,227	36·12	
	Dacca	2,649,522	11,317	51·24	281	1·20	9	·03	...	...	5,408	24·48	336	1·44	27	·12	85	·36	1,478	6·60	7,624	34·44	7,306	33·00	
Dacca	Mymensingh	3,915,068	16,152	49·44	135	·36	30	·08	...	...	7,421	22·68	94	·24	...	...	84	·24	2,181	6·60	9,945	30·48	9,568	29·28	
	Faridpur	1,937,646	7,987	49·44	206	1·20	1	·006	...	...	4,789	29·28	74	·36	...	...	69	·36	911	5·64	6,000	37·08	6,382	39·48	
	Backergunge	2,291,752	7,027	36·72	28	·12	...	...	...	...	3,346	17·52	19	·09	...	...	117	·60	1,496	7·80	5,006	26·16	6,191	32·40	
	Tippera	2,117,991	6,931	39·24	2	·01	12	·06	...	...	2,667	15·00	21	·10	25	·12	88	·48	1,043	5·88	3,858	21·84	3,792	21·48	
Chittagong	Noakhali	1,141,728	4,667	48·96	16	·12	...	...	...	...	2,245	23·52	3	·02	...	...	64	·60	455	4·68	2,783	29·16	2,866	30·12	
	Chittagong	1,353,250	3,977	35·16	2	·01	...	...	...	...	2,467	21·84	5	·03	...	...	74	·60	115	·96	2,663	23·52	3,058	27·00	Not under registration.
	Chittagong Hill Tracts	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Patna	1,624,985	6,875	50·76	80	·48	38	·24	28	·12	2,187	16·08	498	3·60	45	·24	124	·84	1,716	19·60	4,716	34·80	5,736	42·24	
	Gaya	2,059,933	9,173	53·16	270	1·56	37	·12	...	...	3,398	19·20	73	·36	...	...	98	·48	1,087	6·24	4,863	28·32	7,350	42·72	
	Shahabad	1,982,696	8,523	52·08	63	·36	6	·03	73	·36	3,780	23·04	12	·07	...	...	78	·36	1,238	7·56	5,250	32·04	6,903	42·12	
Patna	Saran	2,409,509	7,180	35·64	92	·36	5	·02	342	1·68	2,088	13·32	421	2·04	...	...	126	·60	2,314	11·52	5,088	29·76	6,943	34·56	
	Champaran	1,790,463	6,883	46·08	413	2·76	7	·03	...	...	3,341	22·32	8	·04	...	...	61	·36	1,328	8·88	5,158	34·56	5,176	34·68	
	Muzaffarpur	2,754,790	11,412	49·68	1,433	6·24	18	·07	21	·08	6,334	27·48	94	·36	4	·01	142	·60	1,747	6·72	9,712	39·96	7,635	31·44	
	Darbhanga	2,912,611	12,489	51·24	1,136	4·68	4	·01	5	·01	6,863	28·20	71	·94	...	...	145	·48	1,488	6·12	9,712	39·96	6,853	39·72	
	Monghyr	2,068,804	8,223	47·64	135	·72	12	·06	71	·36	4,041	23·40	29	·12	...	...	84	·48	955	5·52	5,517	31·68	6,566	37·68	
Bhagalpur	Bhagalpur	2,088,953	9,389	53·28	227	1·20	9	·04	...	...	4,420	25·32	18	·09	...	...	73	·36	770	4·32	5,517	31·68	5,573	35·64	
	Purnea	1,874,794	7,019	44·88	7	·03	4	·02	...	...	5,082	32·52	2	·01	...	...	38	·24	227	1·44	5,360	34·20	5,316	33·04	
	Malda	884,030	4,039	54·72	60	·72	2	·02	...	...	2,390	32·40	5	·06	...	...	21	·24	287	3·84	2,765	37·44	2,978	26·28	
	Sonthal Parganas	1,809,737	6,498	43·08	112	·72	48	·24	4	·02	2,849	19·44	13	·08	...	...	49	·24	306	1·92	3,481	23·04	5,524	32·04	
	Cuttack	2,062,758	6,525	37·92	285	1·56	31	·12	...	...	2,298	13·32	560	3·24	28	·12	102	·48	1,321	7·68	4,625	26·88	5,524	32·04	
Orissa	Balasore	1,071,197	2,637	29·52	27	·24	18	·12	...	...	1,047	11·64	127	1·32	...	...	59	·60	337	3·96	2,025	23·88	2,237	26·28	
	Puri	1,017,284	2,646	31·20	132	1·44	14	·12	...	...	611	7·20	314	3·60	51	·60	50	·48	853	9·96	2,025	23·88			Not under registration.
	Angul and Khondmals	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Hazaribagh	1,177,961	3,782	38·52	44	·36	11	·10	...	...	1,943	19·68	17	·12	...	...	40	·36	506	5·04	2,561	26·04	3,362	34·20	
Chota Nagpur	Ranchi	1,187,923	3,778	38·16	...	...	5	·04	...	...	1,688	17·04	87	·84	2	·01	24	·24	742	7·44	2,548	25·68	2,917	29·40	
	Palamau	619,600	2,376	45·96	...	...	14	·24	...	...	1,322	24·72	13	·24	...	...	28	·48	320	6·12	1,657	32·04	2,292	44·28	
	Manbhum	1,301,364	3,277	30·12	14	·12	21	·12	...	...	1,394	11·88	26	·12	...	...	28	·24	490	4·44	1,873	17·16	2,124	19·56	
	Singhbhum	613,579	1,674	32·64	...	...	42	·72	...	...	887	17·28	19	·36	...	...	25	·48	103	1·92	1,076	21·00	1,008	19·68	
	Total	74,428,193	259,102	41·76	7,727	1·20	686	·10	578	·08	149,392	24·00	4,527	·72	514	·07	2,829	·36	36,060	5·76	202,313	32·52	201,671	33·60	
	Average of corresponding month of previous five years	.....	268,637	43·20	8,914	1·32	670	·10	Data not available.		153,857	24·72	4,502	·72	Data not available.		3,597	·48	37,041	5·88	208,671	33·60			
	Difference + or −	.....	−9,335	−1·44	−1,187	−·12	+16	Equal			−4,465	−·72	−65	Equal			−768	−·12	−981	−·12	−6,358	−1·08			

Office of Sanitary Commissioner for Bengal,
The 13th December 1902.

B. H. Deare, Captain, I.M.S.,
Offg. Sanitary Commissioner for Bengal.

IRRIGATION DEPARTMENT, BENGAL.

Statement showing heights over mean sea-level and low water in the rivers Ganges, Bhagirathi, Jalangi, and Brahmaputra for the month of October 1902, and the highest reading of each gauge over M. S. L. since 1876.

Date.	River Ganges.																		River Bhagirathi.		River Jalangi.		River Brahmaputra.	
	Mirzapore.		Benares.		Buxar.		Dinapore.		Monghyr.		Sahibganj.		Rampur Boalia.		Goalundo.		Berhampore.		Sarupganj.		Gauhati.	
	Distance in miles.	From Allahabad ... 96	From Allahabad ... 134	From Mirzapore ... 45	From Benares 90		From Benares 177	From Buxar 97	From Benares 297	From Dinapore 110	From Benares 361	From Monghyr 94	From Benares 471	From Sahibganj ... 90	From Benares 591	From Rampur Boalia ... 120								
	Highest Gauge Reading.	26th August 1889. 253·47	26th August 1889. 241·46		31st August 1898. 200·63		5th September 1901. 169·73		8th September 1901. 129·60		23rd August 1879. 98·25		26th August 1879. 69·25		20th August 1893. 31·52		14th August 1890. 64·70		25th September 1900. 36·90		24th July 1900. 179·41	
		Height over zero of gauge.	Height over mean sea-level.	Height over zero of gauge.	Height over mean sea-level.	Height over zero of gauge.	Height over mean sea-level.	Height over zero of gauge.	Height over mean sea-level.	Height over zero of gauge.	Height over mean sea-level.	Height over zero of gauge.	Height over mean sea-level.	Height over zero of gauge.	Height over mean sea-level.	Height over zero of gauge.	Height over mean sea-level.	Height over zero of gauge.	Height over mean sea-level.	Height over zero of gauge.	Height over mean sea-level.	Height over zero of gauge.	Height over mean sea-level.	Height over zero of gauge.	Height over mean sea-level.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1st ...	...	17·50	223·72	12·67	209·47	14·67	183·72	21·30	155·53	15·58	117·43	19·17	87·17	19·20	61·20	19·25	28·19	23·00	56·74	25·40	25·40	26·30	175·06		
2nd ...	...	17·00	223·22	12·67	209·47	14·08	183·13	20·60	154·83	15·33	117·18	18·92	86·92	19·05	61·05	19·17	28·11	22·67	56·41	25·00	25·00	27·00	175·76		
3rd ...	...	16·00	222·22	12·50	209·30	13·42	182·47	19·80	154·03	14·50	116·35	18·25	86·25	18·85	60·85	19·00	27·94	22·25	55·99	24·80	24·80	27·30	176·06		
4th ...	...	15·00	221·22	10·00	206·80	12·75	181·80	19·10	153·33	14·50	116·35	17·67	85·67	18·55	60·55	18·92	27·86	21·83	55 57	24·30	24·30	26 50	175·26		
5th ...	...	14·00	220·22	9·17	205·97	12·17	181·22	18·40	152·63	14·08	115·93	17·00	85·00	18·30	60·30	18·58	27 53	21·42	55·16	24·00	24·00	25·90	174·66		
6th ...	...	14·00	220 22	7·83	204·63	11·50	180·55	17·80	152·03	13·92	115·77	16·58	84·58	18·00	60·00	18·17	27·11	21·79	55·53	23·60	23·60	24·80	173·56		
7th ...	...	13·83	220·05	7·33	204·13	11·00	180·05	17·10	151·33	13·83	115·68	16·08	84·08	17·50	59·50	17·83	26·77	20·17	53·91	23·00	23·00	24·40	173·16		
8th ...	...	13·50	219·72	6·67	203·47	10·50	179·55	16·60	150·83	13·58	115·43	15·67	83·67	17·05	59·05	17·50	26·44	19·50	53·24	22·40	22·40	23·90	172·66		
9th ...	...	13·00	219·22	6·17	202·97	9·92	178·97	16·10	150·33	13·50	115·35	15·17	83·17	16·60	58·60	17·17	26·11	18·92	52·66	20·80	20·80	23·30	172·06		
10th ...	...	13·00	219·22	5·83	202·63	9·50	178·55	15·80	149·83	13·25	115·10	15·08	83·08	16·10	58·10	16·83	25·77	18·42	52·16	20·60	20·60	23·25	172·01		
11th ...	...	10·50	216·72	5·42	202·22	9·08	178·13	15·20	149·43	13·08	114·93	14·92	82·92	15·70	57·70	16 33	25·27	17·67	51·41	20·30	20·30	22·80	171·56		
12th ...	...	10·50	216·72	5·00	201·80	8·75	177·80	14·90	149·13	13·08	114·93	14·67	82·67	15·30	57·30	15·92	24·86	17·25	50·99	20·30	20·30	22·80	171·56		
13th ...	...	10·33	216·55	4·67	201·47	8·42	177·47	14·50	148·73	12·58	114·43	14·50	82·50	14·95	56·95	15·58	24·52	16·67	50·41	20·30	20·30	22·30	171·06		
14th ...	...	10·17	216·39	4·33	201·13	8·08	177·13	14·20	146·43	12·42	114·27	14·17	82·17	14·45	56·45	15·25	24·19	16·25	49·99	18·50	18·50	20·70	169·46		
15th ...	...	10·17	216·39	3·83	200·63	7·92	176·97	13·90	148·13	12·17	114·02	13·83	81·83	14·15	56·15	14·92	23·86	15·67	49·41	18·00	18·00	20·00	168·76		
16th ...	...	10·00	216·22	3·50	200·30	7·58	176·63	13·60	147·83	11·92	113·77	13·58	81·58	13·90	55·90	14·67	23·61	15·17	48·91	18·00	18·00	19·00	167·76		
17th ...	...	9·83	216·05	3·25	200·05	7·33	176·38	13·40	147·63	11·75	113·60	13·25	81·25	13·60	55·60	14·42	23·36	14·75	48·49	18·00	18·00	18·20	166·96		
18th ...	...	9·67	215·89	3·00	199·80	7·08	176·13	13·10	147·33	11·42	113·27	13·00	81·00	13·35	55·35	14·17	23·11	14·42	48·16	18·00	18·00	17·10*	165·86		
19th ...	...	9·50	215·72	2·92	199·72	6·83	175·88	12·90	147·13	11·17	113·02	12·75	80·75	13·00	55·00	13·92	22·86	13·92	47·66	17·50	17·50	16·20	164·96		
20th ...	...	9·50	215·72	2·75	199·55	6·67	175·72	12·70	146·93	10·58	113·43	12·50	80·50	12·80	54·60	13·67	22·61	13·50	47·24	16·30	16·30	15·30	164·06		
21st ...	...	9·33	215·55	2·67	199·47	6·58	175·63	12·50	146·73	10·50	113·35	12·17	80·17	12·35	54·35	13·33	22·27	13·17	46·91	16·00	16·00	14·50	163·26		
22nd ...	...	9·00	215·22	2·50	199·30	6·33	175·38	12·50	146·73	10·17	113·02	11·92	79·92	12·05	54·05	13·00	21·94	12·83	46·57	15·40	15·40	14·30	163·06		
23rd ...	...	8·75	214·97	2·42	199·22	6·17	175·22	12·30	146·53	10·17	113·02	11·67	79·67	11·80	53·80	12·75	21·69	12·42	46·16	15·10	15·10	14·00	162·76		
24th ...	...	8·50	214·72	2·37	199·17	6·00	175·05	12·10	146·33	9·92	111·77	11·42	79·42	11·50	53·50	12·33	21·27	12·00	45·74	14·60	14·60	13·20	161·96		
25th ...	...	8·25	214·47	2·33	199·13	5·75	174·80	12·00	146·23	9·58	111·43	11·25	79·25	11·25	53·25	11·92	20·86	11·67	45·41	14·00	14·00	12·20	160·96		
26th ...	...	8·00	214·22	2·25	199·05	5·58	174·63	11·70	145·93	9·42	111·27	11·00	79·00	11·00	53·00	11·67	20·61	11·33	45·07	13·60	13·60	11·80	160·56		
27th ...	...	7·75	213·97	2·21	199·01	5·42	174·47	11·60	145·83	9·42	111·27	10·83	78·83	10·65	53·65	11·42	20·36	11·25	44·99	13·40	13·40	11·70	160·46		
28th ...	...	7·67	213·89	2·13	198·93	5·25	174·30	11·40	145·63	9·08	110·93	10·67	78·67	10·50	53·50	11·17	20·11	10·83	44·37	13·00	13·00	11·10	159·86		
29th ...	...	7·50	213·72	2·08	198·88	5·08	174·13	11·20	145·43	8·90	110·85	10·42	78·42	10·30	53·30	11·08	20·02	10·58	44·32	12·80	12·80	10·70	159·46		
30th ...	...	7·50	213·72	1·96	198·76	4·83	173·88	11·00	145·23	8·67	110·62	10·17	78·17	10·15	53·15	11·00	19·94	10·29	44·03	12·60	12·60	10·50	159·26		
31st ...	...	7·25	213·47	1·75	198·55	4·67	173·72	10·80	145·03	8·58	110·43	10·00	78 00	10·05	52·05	10·75	19·69	10·00	43·74	12·50	12·50	10·50	159·26		

CALCUTTA,
The 16th December 1902.

R. C. EDGE,
Under-Secy. to the Govt. of Bengal.

IRRIGATION DEPARTMENT, BENGAL.

Abstract statement showing Tollage on Canals in Bengal classed as Major Works for the month of October 1902, as compared with that of the corresponding month of the previous year.

Canals.	Tollage, 1902-1903.		Tollage, 1901-1902.	
	During the month.	To end of the month.	During the month.	To end of the month.
1	2	3	4	5
Orissa Circle.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Taldanda Canal System	845 15 6	7,736 6 5	879 1 3	6,159 13 5
Kendrapara ditto	2,918 12 3	18,318 7 11	4,306 14 3	28,694 15 8
High Level, Range I	643 10 9	4,833 15 9	630 5 6	5,047 7 3
Ditto, „ II	196 7 10	992 4 7	126 3 7	944 0 1
Ditto, „ III	28 10 0	154 12 9	16 1 0	174 13 6
Jajpur Canal ...	31 7 9	281 7 9	43 11 6	201 4 3
Total Orissa Circle ...	4,665 0 1	32,317 7 2	6,002 5 1	41,222 6 2
South-Western Circle.				
Midnapore Canal ...	4,777 14 3	44,253 1 3	6,929 1 0	51,954 3 6
Hijili Tidal Canal ..	2,776 12 3	26,214 9 6	3,167 3 6	29,564 7 9
Total South-Western Circle ...	7,554 10 6	70,467 10 9	10,096 4 6	81,518 11 3
Sone Circle.				
Patna Canal System ...	533 1 9	4,811 6 11	672 0 3	8,795 3 6
Arrah ditto ...	282 5 0	3,889 0 9	417 0 6	5,334 7 0
Buxar ditto ...	221 5 6	1,682 5 6	199 5 6	1,770 12 3
Total Sone Circle ...	1,036 12 3	10,382 13 2	1,288 6 3	15,900 6 9
Grand Total ...	13,256 6 10	1,13,167 15 1	17,386 15 10	1,38,641 8 2

Calcutta,
The 16th December 1902.

R. C. Edge,
Under-Secy. to the Govt. of Bengal.

IRRIGATION DEPARTMENT, BENGAL.

Abstract Statement showing Tollage on Canals in Bengal classed as Minor Works and Navigation for the month of October 1902, as compared with that of the corresponding month of the previous year.

Canals.	Tollage, 1902-1903.		Tollage, 1901-1902.	
	During the month.	To end of the month.	During the month.	To end of the month.
1	2	3	4	5
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Calcutta and Eastern Canals	25,078 3 6	1,26,124 7 3	31,083 2 9	1,24,124 0 6
Tolly's Nala ...	5,582 3 9	32,222 4 0	5,894 13 0	32,105 11 0
Total ...	30,660 7 3	1,58,346 11 3	36,977 15 9	1,56,229 11 6
Orissa Coast Canal ...	2,165 4 9	15,045 11 0	3,070 7 6	23,611 0 9
Nadia Rivers ...	11,352 9 3	60,599 4 10	10,691 10 0	60,327 6 0
Grand Total ...	44,178 5 3	2,33,991 11 1	50,740 1 3	2,40,168 2 3

Calcutta,
The 16th December 1902.

R. C. Edge,
Under-Secy. to the Govt. of Bengal.

GOVERNMENT OF BENGAL, IRRIGATION DEPARTMENT.

Approximate Return of Traffic on the Circular and Eastern Canals for the week ending Saturday, the 13th December 1902, as compared with the corresponding week of the previous year.

Nature of Cargo.	Week ending Saturday, the 13th December 1902.			Week ending Saturday, the 14th December 1901.		
	Number of boats.	Weight of cargo.	Tollage.	Number of boats.	Weight of cargo.	Tollage.
		Mds.	Rs.		Mds.	Rs.
Rice and paddy	557	65,025	1,000	626	43,335	581
Jute	248	1,05,675*	1,633	508	1,59,275†	2,551
Firewood	70	45,300	685	48	29,225	448
Other articles	488	1,35,990	1,866	639	1,39,975	2,007
Total ...	1,363	3,51,990	5,184	1,821	3,71,810	5,587

* Weight by canal measurement, 1,01,537 maunds.
† Ditto ditto, 1,56,987½ ,,

GOVERNMENT OF BENGAL, IRRIGATION DEPARTMENT.

Approximate Return of Traffic on the Circular and Eastern Canals for the week ending Saturday, the 6th December 1902, as compared with the corresponding week of the previous year.

Nature of Cargo.	Week ending Saturday, the 6th December 1902.			Week ending Saturday, the 7th December 1901.		
	Number of boats.	Weight of cargo.	Tollage.	Number of boats.	Weight of cargo.	Tollage.
		Mds.	Rs.		Mds.	Rs.
Rice and paddy	403	39,625	555	355	38,575	519
Jute	317	85,925*	1,344	580	1,94,795†	3,077
Firewood	57	51,375	772	77	62,725	949
Other articles	533	1,56,275	2,002	603	1,41,115	1,948
Total ...	1,310	3,33,200	4,673	1,615	4,37,210	6,493

* Weight by canal measurement, 89,000 maunds.
† Ditto ditto 1,80,074½ ,,

EAST INDIAN RAILWAY.

Statement of Goods Traffic in staples carried during the four weeks ending 27th September 1902 as compared with the same period of 1901.

STAPLES.	1901.		1902.		INCREASE.		DECREASE.	
	Weight.	Freight.	Weight.	Freight.	Weight.	Freight.	Weight.	Freight.
	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.
Apparel, including drapery, haberdashery, millinery, uniforms, accoutrements, boots and shoes	7,034	8,865	7,827	9,412	793	.....	.....	453
Coal and coke carried for the public and foreign railways	1,09,58,618	15,65,529	1,03,91,395	12,22,903	.....	.....	5,67,223	3,43,526
Cotton—								
(1) Raw	52,678	39,565	22,472	14,667	.....	.....	30,206	24,898
(2) Manufactured—								
(*a*) Twist and Yarn, European	5,428	5,127	2,160	2,748	.....	.....	3,268	2,379
(*b*) Ditto, Indian	39,088	13,626	40,776	14,068	1,688	442	.....	.....
(*c*) Piece-goods, European	1,07,738	1,07,645	1,24,709	1,11,077	16,971	3,432	.....	.....
(*d*) Ditto, Indian	15,875	10,536	13,648	7,526	.....	.....	2,227	3,010
(*e*) Others	2,223	1,822	4,217	3,152	1,994	1,330	.....	.....
Chemicals excepting saltpetre	7,404	6,198	5,313	4,958	.....	.....	2,091	1,240
Drugs—								
1.—Intoxicating, other than opium ...	126	69	298	239	172	170	.....	.....
2.—Non-intoxicating	8,063	5,187	5,195	3,996	.....	.....	2,868	1,191
Dyes and Tans—								
1.—Al (Morinda citrifolia)	151	19	356	59	205	40	.....	.....
2.—Alizarine and aniline dyes	101	473	412	261	311	... ..	.....	212
3.—Cutch	3,099	1,267	3,209	949	101	.....	.....	318
4.—Indigo	350	125	198	239	.....	134	152	.....
5.—Myrabolams	5,441	1,591	4,201	829	.....	.....	1,240	762
6.—Tanning barks	135	16	382	57	247	41	.....	.....
7.—Turmeric	6,975	4,473	5,103	3,576	.....	.....	1,872	897
8.—Others	2,995	1,514	8,299	2,391	5,304	877	.....	.....
Fodder—								
1.—Oilcake	75,023	7,241	56,429	9,026	.....	1,785	18,594	.....
2.—Hay, straw and grass	24,139	2,331	16,763	2,595	.....	267	7,376	.....
Fruits and vegetables, fresh	5,227	2,969	7,716	3,057	2,489	88	.....	.....
Grain and Pulse—								
1.—Wheat	4,73,239	1,19,646	6,02,021	1,44,717	1,28,782	25,071	.....	.....
2.—Wheat flour	64,328	14,127	65,228	13,506	900	.....	.....	621
3.—Rice in the husk	1,44,173	17,021	63,703	3,068	.....	.....	80,470	7,953
4.—Rice not in the husk	4,08,613	73,019	2,42,970	41,725	.....	.....	1,65,643	31,294
5.—Jowar and bajra	36,610	7,233	17,640	3,404	.....	.....	18,970	3,892
6.—Gram and pulse	5,01,963	1,38,797	4,73,512	1,16,591	.....	.....	28,451	22,206
7.—Others	1,25,774	25,389	82,343	12,260	.....	.....	43,431	13,129
Hides and Skins—								
1.—Hides of cattle	22,352	9,679	28,325	13,094	5,973	3,415	.....	.....
2.—Skins of sheep, &c.	21,372	12,110	15,064	7,379	.....	.....	6,308	4,731
Horns	2,387	985	804	309	.....	.....	1,583	676
Hemp (Indian) and other fibres (excluding jute)	7,908	1,303	5,616	1,003	.....	.....	2,292	300
Jute—								
1.—Raw	1,69,554	27,454	3,24,494	47,089	1,54,940	19,635	.....	.....
2.—Gunny-bags and cloth	62,922	30,434	42,234	19,238	.....	.....	20,688	11,196
Lac	43,102	21,500	29,013	19,118	.....	.....	14,089	2,382
Leather—								
1.—Unwrought	3,196	4,388	2,510	3,129	.....	.....	686	1,259
2.—Wrought excepting boots ands hoes ...	1,197	1,423	1,620	993	.....	.....	177	430
Liquors—								
1.—Ale and Beer	10,153	4,372	15,088	4,950	4,935	578	.....	.....
2.—Spirits of all kinds, including country spirit	1,262	1,443	1,707	1,601	445	158	.....	.....
3.—Wines	1,879	2,909	2,759	3,049	880	140	.....	.....
4.—All other sorts, including toddy and fermented liquor, other than ale and beer	136	71	67	11	.....	.....	69	60
Metals—								
1.—Brass, unwrought	2,295	1,020	1,278	604	.....	.....	1,017	416
2.— Do., wrought	8,195	2,877	20,237	6,918	12,042	4,041	.....	.....
3.—Copper, unwrought	111	34	1,847	2,317	1,736	2,283	.....	.....
4.— Do., wrought	1,131	644	2,093	2,062	962	1,418	.....	.....
5.—Iron and steel—								
(*a*) Cast	20,954	15,556	39,635	24,401	18,581	8,845	.....	.....
(*b*) Unwrought	674	370	35,406	1,997	34,732	1,627	.....	.....
(*c*) Wrought	41,288	18,573	81,435	30,971	40,147	12,398	.....	.....
(*d*) Manufactures of iron and steel	13,875	6,547	26,797	12,915	12,922	6,386	.....	.....
6.—Zinc and spelter	2,002	1,107	4,228	3,014	2,224	1,907	.....	.....
7.—Others	3,065	3,394	8,352	5,845	5,287	2,451	.....	.....
Oils—								
1.—Kerosine	1,22,534	38,954	1,33,077	46,690	10,543	7,736	.....	.....
2.—Castor	1,030	308	4,641	1,500	3,611	1,192	.....	.....
3.—Cocoanut	784	343	5,195	1,792	4,411	1,449	.....	.....
4.—Mustard and rape	2,056	1,185	6,800	1,837	4,744	652	.....	.....
5.—Others	6,567	3,130	5,020	2,225	.....	.....	1,547	905
Oilseeds—								
1.—Castor	47,218	11,088	59,611	11,545	12,303	457	.....	.....
2.—Earthnuts	40	15	10	3	.....	.....	30	12
3.—Linseed	2,32,597	56,320	2,04,994	58,298	.....	1,978	27,603	.....
4.—Poppy	38,721	10,012	26,953	6,912	.....	.....	11,768	3,100
5.—Rape and mustard	2,94,354	98,583	2,32,214	53,749	.....	.....	62,140	44,834
6.—Til or jinjili	7,414	1,283	2,230	433	.....	.....	5,184	850
7.—Others	57,390	15,234	11,997	2,585	.....	.....	45,393	12,649
Opium	483	438	977	739	494	301	.....	.....
Paper and pasteboard	18,099	9,040	15,884	7,318	.....	.....	2,215	1,722
Provisions—								
1.—Dried fruits and nuts	21,105	8,208	5,099	4,377	.....	.....	16,006	3,831
2.—Ghee	28,604	20,918	49,208	32,366	20,604	11,448	.....	.....
3.—Potatoes	47,524	22,292	63,041	33,249	15,517	10,957	.....	.....
4.—Others	27,644	10,729	29,163	12,148	1,519	1,419	.....	.....
Railway plant & rolling-stock carried for the public & foreign railways—								
1.—Locomotives, engines and tenders and parts thereof	12,701	7,507	1,006	94	.....	.....	11,695	7,413
2.—Carriages and trucks and parts thereof	6,463	2,619	15,912	4,728	9,449	2,109	.....	.....
3.—Materials—								
(*a*) Steel rails and fish-plates ...	18,437	8,173	56,479	17,403	38,042	9,230	.....	.....
(*b*) Sleepers and keys of steel and cast-iron	...	...	1,657	219	1,657	219	.....	.....
(*c*) Other sorts	85,325	8,430	1,41,135	33,025	55,810	24,595	.....	.....
Salt	3,25,596	70,931	2,98,790	60,840	.....	.....	26,806	10,091

Staples.	1901.		1902.		Increase.		Decrease.	
	Weight.	Freight.	Weight.	Freight.	Weight.	Freight.	Weight.	Freight.
	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.
Saltpetre and other saline substances—								
1.—Saltpetre	30,150	12,140	45,379	15,291	15,229	3,151	.....	.....
2.—Other saline substances	23,096	4,805	28,902	8,397	8,806	3,592	.....	.....
Silk—								
1.—*Raw—*								
(*a*) Foreign	9	9	5	16	.....	7	4	.....
(*b*) Indian	1,033	813	818	244	.....	.....	215	569
2.—*Piece-goods—*								
(*a*) Foreign	.....	.....	.....	.....	.....	.....	.....	.....
(*b*) Indian	171	292	31	73	.....	.....	140	219
Spices—								
1.—Betelnuts	20,904	16,326	19,334	12,265	.....	.....	1,570	4,061
2.—Cardamoms	757	768	580	581	.....	.....	177	187
3.—Chillies	5,160	3,547	6,234	2,455	1,074	.....	.....	1,092
4.—Ginger	986	427	1,216	320	230	.....	.....	107
5.—Pepper	2,017	1,784	1,225	1,185	.....	.....	792	599
6.—Others	10,362	12,370	12,525	5,185	2,163	.....	.....	7,185
Stone and lime	3,09,261	26,949	3,15,574	58,569	6,313	31,620	.....	.....
Sugar—								
1.—Refined	22,942	3,976	42,204	13,085	19,262	9,109	.....	.....
2.—Unrefined—								
(*a*) Sugar	87,591	27,463	75,347	17,430	.....	.....	12,224	10,033
(*b*) *Gur, rab*, jaggree, molasses and other saccharine produce	88,636	10,809	66,831	7,687	.....	.....	21,805	3,122
Tea—								
1.—Foreign	.....	.....	.....	.....	.....	.....	.....	.....
2.—Indian	2,875	1,769	2,599	1,609	.....	.....	276	160
Tobacco	40,583	15,794	40,337	15,873	.....	79	246	.....
Wood—								
1.—Timber, unwrought	96,980	12,941	73,829	11,322	.....	.....	23,151	1,619
2.—Manufactures	11,915	5,205	12,430	3,186	515	.....	.....	2,019
Wool—								
1.—Raw	1,611	929	1,732	1,318	121	398	.....	.....
2.—Manufactured—								
(*a*) Carpets and rugs	944	1,242	843	1,727	.....	485	101	.....
(*b*) Piece-goods, European	3	7	1,556	202	1,553	195	.....	.....
(*c*) Ditto, Indian	1,235	1,433	1,627	2,788	392	1,345	.....	.....
(*d*) Other sorts of manufactures	3,253	4,546	2,003	1,754	.....	.....	1,250	2,792
All other articles of merchandise—								
1.—Bones	5,807	1,378	24,850	5,116	19,043	3,738	.....	.....
2.—Firewood	8,592	884	24,271	2,220	15,679	1,336	.....	.....
3.—Indigo seed	8,128	3,225	3,400	1,049	.....	.....	4,728	2,176
4.—Paints and colours	2,410	1,499	984	743	.....	.....	1,426	756
5.—Seeds other than oilseeds	26,611	5,851	1,630	423	.....	.....	24,981	5,428
6.—Others	10,17,667	3,05,584	15,12,701	3,32,839	4,95,034	27,255	.....	.....
Total	1,67,54,998	32,40,099	1,66,50,585	28,88,213	.....	.....	1,04,413	3,51,886
Military stores	17,920	55,713	15,901	25,012	.....	.....	2,019	30,701
Coal for railway	17,41,067	1,20,394	12,10,009	99,129	..	.....	5,31,058	21,265
Railway materials	17,06,955	54,818	34,40,475	74,675	17,33,520	19,857	.....	.....
Live-stock	.....	16,735	.....	16,168	.....	.....	.....	567
Total	2,02,20,940	34,87,759	2,13,16,970	31,03,197	10,96,030	.....	.....	3,84,562

T. Jackson, for *Acting Chief Auditor.*

Traffic Audit Office, Goods Division, Calcutta, *the 15th December 1902.*

EASTERN BENGAL STATE RAILWAY.

Abstract of Principal Commodities carried over the Eastern Bengal State Railway during the month of August 1902 as compared with the same month of the previous year.

No.	STAPLES.	1902.	1901.	Increase in 1902.	Decrease in 1902.	EXPLANATIONS OF FLUCTUATIONS BY TRAFFIC SUPERINTENDENT.
		Tons.	Tons.	Tons.	Tons.	
1	Apparel, including drapery, haberdashery, millinery, uniforms, accoutrements, boots and shoes.	19	11	8	.....	
2	Coal and coke carried for the Public and Foreign Railways.	24,099	17,893	6,206	.....	
3	Cotton—					
	(1) Raw	105	56	49	.....	
	(2) Manufactured—					
	(*a*) Twist and yarn, European	220	247	.....	27	
	(*b*) Ditto, Indian	473	243	230	.....	
	(*c*) Piece-goods, European	1,148	1,275	.....	127	
	(*d*) Ditto, Indian	22	16	6	.....	
	(*e*) Others	.....	.....	.....	.....	
4	Chemicals, excepting saltpetre	26	14	12	.....	
5	Drugs—					
	(1) Intoxicating, other than opium	23	5	18	.....	
	(2) Non-intoxicating—					
	(*a*) Medicinal preparations	.....	.....	.....	.....	
	(*b*) Others	41	51	.....	10	
6	Dyes and Tans—					
	(1) Al (Morinda citrifolia)	.....	.....	.....	.....	
	(2) Alizarine and Aniline dyes	.....	.....	.....	.....	
	(3) Cutch	24	20	4	.....	
	(4) Indigo	.....	.....	.....	.....	
	(5) Myrabolams	.....	.....	.....	.....	
	(6) Tanning barks	.....	.....	.....	.....	
	(7) Turmeric	103	147	.....	44	
	(8) Others	24	3	21	.....	
7	Fodder—					
	(1) Oilcake	427	500	.....	73	
	(2) Hay, straw and grass	1,208	1,739	.....	531	
8	Fruits and vegetables, fresh	86	198	.....	112	
9	Grain and pulse—					
	(1) Gram and pulse	2,073	2,154	.....	81	
	(2) Jawar and bajra	.....	.....	.....	.....	
	(3) Rice in the husk	1,090	1,747	.....	657	
	(4) Do. not in the husk	3,879	3,205	674	.....	
	(5) Wheat	88	239	.....	151	
	(6) Do. flour	172	144	28	.....	
	(7) Others	82	44	35	.....	
10	Hides and skins—					
	(1) Hides of cattle—					
	(*a*) Dressed or tanned	.....	.....	.....	.....	
	(*b*) Raw	417	491	.....	74	
	(2) Skins of sheep and other animals—					
	(*a*) Dressed or tanned	.....	.....	.....	.....	
	(*b*) Raw	62	59	3	.....	
11	Horns	12	10	2	.....	
12	Hemp (Indian) and other fibres, excluding jute.	.....	11	.....	11	
13	Jute—					
	(1) Raw	71,351	66,060	5,291	.....	
	(2) Gunny-bags and cloth	577	481	96	.....	
14	Lac	47	47	.....	.....	
15	Leather—					
	(1) Unwrought	.....	.....	.....	.....	
	(2) Wrought, excepting boots and shoes	.....	.....	.....	.....	
16	Liquors—					
	(1) Ale and beer	15	23	.....	8	
	(2) Spirits of all kinds, including country spirit.	.....	.....	.....	.....	
	(3) Wine	56	53	3	.....	
	(4) All other sorts, including toddy and fermented liquor, other than ale and beer.	.....	.....	.....	.....	
17	Metals—					
	(1) Brass, unwrought	19	24	.....	5	
	(2) Do., wrought	183	185	.....	2	
	(3) Copper, unwrought	13	18	.....	5	
	(4) Do., wrought	8	10	.....	2	
	(5) Iron and steel—					
	(*a*) Cast	29	58	.....	29	
	(*b*) Unwrought	.....	.....	.....	.....	
	(*c*) Wrought	617	701	.....	84	
	(*d*) Manufactures	164	283	.....	119	
	(6) Others	101	76	25	.....	
1	Oils—					
	(1) Kerosine	8,322	5,940	2,382	.....	
	(2) Castor	7	7	.....	.....	
	(3) Cocoanut	119	142	.....	23	
	(4) Mustard and rape	160	292	.....	132	
	(5) Others	34	40	.....	6	
19	Oilseeds—					
	(1) Castor	57	.....	57	.....	
	(2) Earthnuts	.....	.....	.....	.....	
	(3) Linseed	750	1,267	.....	517	
	(4) Poppy	.....	28	.....	28	
	(5) Rape and mustard	1,571	929	642	.....	
	(6) Til or jinjili	6	71	.....	65	
	(7) Others	11	8	3	.....	
20	Opium	.....	.....	.....	.....	
21	Paper and pasteboard	458	405	53	.....	
22	Provisions—					
	(1) Dried fruits and nuts	23	23	.....	.....	
	(2) Ghee	63	38	25	.....	
	(3) Others	743	711	32	.....	

No.	Staples.	1902.	1901.	Increase in 1902.	Decrease in 1902.	Explanations of fluctuations Traffic Superintendent.
		Tons.	Tons.	Tons.	Tons.	
23	Railway Plant, &c., for the Public and Foreign Railways—					
	(1) Locomotive engines and tenders and parts thereof.	52	176	.....	124	
	(2) Carriages and trucks and parts thereof	4	1	3	.....	
	(3) Materials—					
	(*a*) Steel rails and fish-plates	.....	31	...	31	
	(*b*) Sleepers and keys of steel and cast-iron.	44	14	30	.....	
	(*c*) Others	82	114	.....	32	
24	Salt	4,938	4,881	57	.....	
25	Saltpetre and other saline substances—					
	(1) Saltpetre	.....	.....	.....	.....	
	(2) Other saline substances	201	160	41	.....	
26	Silk—					
	(1) Raw—					
	(*a*) Foreign	.....	.....	.....	.....	
	(*b*) Indian	11	.....	11	.....	
	(2) Piece-goods—					
	(*a*) Foreign	.....	.....	.....	.....	
	(*b*) Indian	.....	.....	.....	.....	
27	Spices—					
	(1) Betelnuts	800	477	323	.....	
	(2) Cardamoms	10	1	9	.....	
	(3) Chillies	209	94	115	.....	
	(4) Ginger	33	45	.....	12	
	(5) Pepper	18	22	.....	4	
	(6) Others	63	78	.....	15	
28	Stone and lime	1,586	1,629	.....	43	
29	Sugar—					
	(1) Refined or crystallized, including sugar-candy.	924	595	329	.....	
	(2) Unrefined—					
	(*a*) Sugar	640	685	.....	45	
	(*b*) Gur, *rab*, jaggery, molasses, and other saccharine produce.	484	1,432	.....	948	
30	Tea—					
	(1) Foreign	.....	.....	.....	.....	
	(2) Indian	4,759	6,360	.....	1,601	
31	Tobacco—					
	(1) Unmanufactured	1,940	2,690	.....	750	
	(2) Manufactured—					
	(*a*) Cigars	28	28	.....	.....	
	(*b*) Other sorts					
32	Wood—					
	(1) Timber, unwrought	479	598	.....	119	
	(2) Manufactures	171	68	103	.....	
33	Wool—					
	(1) Raw	.....	.....	.....	.....	
	(2) Manufactured—					
	(*a*) Carpets and rugs	4	1	3	.....	
	(*b*) Piece-goods, European					
	(*c*) Ditto, Indian					
	(*d*) Other sorts of manufactures ...					
34	All other articles of merchandise	5,777	5,289	488	.....	
	Total ...	144,684	133,911	17,420	6,647	

CALCUTTA, *the 8th December 1902.*

HARPRASAD DAR,
for *Examiner of Accounts, E. B. S. Railway.*

Weekly Return of Traffic Receipts on Indian Railways.

BENGAL CENTRAL RAILWAY COMPANY, LIMITED.

Approximate Return of Traffic and Mileage for the week ended 29th November 1902 on 139 miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings.	Total earnings.	Traffic Train-miles run.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week	33,888	15,865 0 0	75,300 0	9,145 0 0	111 0 0	25,121 0 0	4,745	3,198	7,943
Or per mile of railway	261	122 0 0†	542 0	66 0 0	1 0 0	189 0 0	.....	.....	.....
For previous 21 weeks of half-year*	743,470	2,94,550 0 0	23,11,850 0	2,67,831 0 0	8,135 0 0	5,70,516 0 0	71,003	97,492	168,495
Total for 22 weeks ...	777,358	3,10,415 0 0	23,87,150 0	2,76,976 0 0	8,246 0 0	5,95,637 0 0	75,748	100,690	176,438
COMPARISON.									
Total for corresponding week of previous year	34,531	17,365 0 0	80,858 0	7,936 0 0	1,521 0 0	26,822 0 0	3,962	3,912	7,874
Per mile of railway corresponding week of previous year ..	266	134 0 0	582 0	57 0 0	11 0 0	202 0 0	.....	.....	.....
Total to corresponding date of previous year ...	775,279	3,13,311 0 0	26,77,428 0	3,07,373 0 0	41,891 0 0	6,62,575 0 0	71,473	106,133	177,606

* Audited up to week ending 4th October 1902.
† Coaching traffic calculated on 130 miles only.

ASSAM-BENGAL RAILWAY.

Approximate Return of traffic for the week ended 29th November 1902 on 558 miles open for all descriptions of traffic, and an additional 31 miles for goods and parcels traffic only.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings.	Total earnings.	Traffic Train-miles run.		
	No. of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	38,228	24,014 0 0	2,21,107 0	17,187 0 0	1,192 0 0	42,393 0 0	6,945	9,705	16,650
Or per mile of railway	68·51	43·04	375·39	29·18	2·02	74·24	12·45	16·48	28·93
For previous 21 weeks of half-year	629,281	3,82,453 0 0	48,89,867 0	3,99,330 0 0	29,809 0 0	8,11,592 0 0	133,123	204,220	337,343
Total for 22 weeks ...	667,509	4,06,467 0 0	51,10,974 0	4,16,517 0 0	31,001 0 0	8,53,985 0 0	140,068	213,925	353,993
COMPARISON.									
Total for corresponding week of previous year	40,275	29,390 0 0	1,17,292 0	16,942 0 0	4,115 0 0	50,447 0 0	6,539	6,202	12,741
Per mile of railway corresponding week of previous year ..	72·18	52·67	199·14	28·76	6·99	88·42	11·72	10·53	22·25
Total to corresponding date of previous year	646,285	4,08,781 0 0	28,51,731 0	3,98,234 0 0	30,514 0 0	8,37,529 0 0	137,097	142,042	279,139

FINANCIAL YEAR.

Approximate Statement of Gross Receipts of the Assam-Bengal Railway.

Receipts for week ending 29th November 1902.			Receipts for week ending 30th November 1901.			Total receipts from 1st April 1902 to 29th November 1902.			Total receipts from 1st April 1901 to 30th November 1901.			Total increase in 1902.	Total decrease in 1902.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.		
	Rs.	Rs.		Rs.	Rs.		Rs.			Rs.			Rs.
589	42,393	74·24	589	50,447	88·42	589	13,08,959	...	589	13,58,325	...	.....	49,366

BENGAL AND NORTH-WESTERN RAILWAY.

Approximate Return of Traffic for the week ending 6th December 1902 on 1,261 miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated), including steam-boat.	Total earnings.	Traffic Train-miles run.		
	Numbe of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs.	Mds.	Rs	Rs.	Rs.			
Total traffic for the week on 1,261 miles open	174,640	(a) 82,860	6,39,520	85,350	11,960	(a) 1,80,170	41,729	(b)28,677	70,406
Or per mile of railway	138·49	65·71	507·15	67·68	9·49	142·88	.....	.....	.....
For previous 21½ weeks of half-year(c)	4,140,849	17,21,725	1,13,58,082	12,94,667	3,30,339	33,46,731	931,527	638,170	1,569,697
Total for 22½ weeks	4,315,489	18,04,585	1,19,97,602	13,80,017	3,42,299	35,26,901	973,256	666,847	1,640,103
Comparison.									
Total for corresponding week of previous year on 1,251 miles open	181,646	97,750	5,89,293	81,942	16,227	1,95,919	33,464	(d)31,845	65,309
Per mile of corresponding week of previous year	145·20	78·14	471·06	65·50	12·97	156·61	.....	....	.....
Total to corresponding date of previous year	4,336,887	18,20,959	1,27,50,902	14.50,768	3,67,342	33,39,069	784,823	648,384	1,433,207

(a) Decrease due to return *mêla* traffic from Sonepore and Ajodhya partly held in the corresponding week of the previous year.
(b) Includes 2,480 miles of ballast trains run on open line.
(c) ,, audited figures up to week ending 18th October 1902.
(d) ,, 5,038 miles of ballast trains run on open line.

SEGOWLIE-RAKSAUL BRANCH RAILWAY.

(Worked by the B. & N.-W. Railway.)

Approximate Return of Traffic for the week ending 6th December 1902 on 18 miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings (estimated).	Total earnings.	Traffic Train-miles run.		
	Passengers carried.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
	No.	Rs.	Mds.	Rs.	Rs.	Rs.			
Total traffic for the week on 18 miles open	1,327	214	11.265	234	20	468	362	142	504
Or per mile of railway	73·72	11·89	625·83	13·00	1·11	26·00	.....	.....	.....
For previous 21½ weeks of half-year (a)	42,617	4,622	2,50,727	6,200	218	11,040	6,851	2,829	9,680
Total for 22½ weeks ...	43,944	4,836	2,61,992	6,434	238	11,508	7,213	2,971	10,184
Comparison.									
Total for corresponding week of previous year on 18 miles open	2,560	457	14,419	286	40	783	362	142	504
Per mile of corresponding week of previous year	142·22	25·40	801·06	15·87	2·23	43·50	.....	.....	.....
Total to corresponding date of previous year	56,345	8,475	2,53,416	6,110	398	14,894	9,088	2,468	11,556

(a) Includes audited figures up to week ending 18th October 1902.

SEGOWLIE-RAKSAUL BRANCH RAILWAY.

(Worked by the B. & N.-W. Railway.)

Audited Return of Traffic for the week ending 18th October 1902 on 18 miles open.

	Coaching Traffic.		Merchandise and Mineral Traffic.		Other earnings.	Total earnings.	Traffic Train-miles run.		
	Passengers carried.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
	No.	Rs. A. P.	Mds.	Rs. A. P.	Rs A. P.	Rs. A. P.			
Total traffic for the week on 18 miles open	3,574	185 9 10	6,713	252 9 0	11 8 0	449 10 10	330	174	504
Or per mile of railway ...	198·56	10 5 0	372·94	14 0 6	0 10 3	24 15 9	.....	.....	.....
For previous 14½ weeks of half-year	28,068	2,612 4 9	119,168	3,954 10 0	130 13 0	6,697 11 9	4,641	1,457	6,098
Total for 15½ weeks ...	31,642	2,797 14 7	125,881	4,207 3 0	142 5 0	7,147 6 7	4,971	1,631	6,602
Comparison.									
Total for corresponding week of previous year on 18 miles open	1,970	360 6 10	20,372	586 8 3	20 10 0	890 9 1	360	144	504
Per mile of corresponding period of previous year	109·44	16 11 0	1,131·78	31 10 3	1 2 4	49 7 7	.....	.....	.....
Total to corresponding date of previous year	37,697	5,542 4 4	153,279	4,068 4 11	175 7 0	9,786 0 3	6,567	1,461	8,028

DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

		Rs.	A.	P.	Rs.	A.	P.
Approximate earnings for the week ending 6th Dec. 1902 ...	Coaching ...	4,426	0	0			
	Goods ...	10,901	0	0	15,385	0	0
	Other earnings ...	58	0	0			
Audited earnings for the corresponding period of 1901 ...	Coaching ...	4,473	0	0			
	Goods ...	10,745	0	0	15,299	0	0
	Other earnings ...	81	0	0			
	Increase ...				86	0	0
Receipts per mile for the week ending 6th Dec. 1902					301	10	8
Ditto for the corresponding period of 1901					299	15	8
	Increase ...				1	11	0
Receipts from 1st July to 6th Dec. 1902					3,52,728	0	0
Ditto for the corresponding period of 1901					3,53,888	0	0
	Decrease ...				1,160	0	0

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OFFICIAL PAPERS.

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CONTENTS.

TRIENNIAL REVENUE REPORT OF BENGAL.

No. 1691*I.A.*

Government of Bengal.

IRRIGATION DEPARTMENT.

ACCOUNTS.

Dated Calcutta, the 17th December 1902.

RESOLUTION.

The Canal Revenue Reports for the triennial period ending 31st March 1902.

READ—

The Canal Revenue Reports for the triennial period ending 31st March 1902, and the Chief Engineer's Note on the same.

The **Major Irrigation Works** are divided into two classes—

I.—Productive Works.

II.—Protective Works.

The Productive Works comprise the Orissa, the Midnapore, the Hijili Tidal, and the Sone Canals. These works are all in operation. The Protective Works,

which are now in process of construction, are the Tribeni and Dhaka Canals. The **Minor Works** for navigation are the Calcutta and Eastern Canals, the Orissa Coast Canal, the Nadia Rivers, and the Gaighata and Buxi Khal: while the works for irrigation are the Saran, the Eden, and the Madhuban Canals.

2. The capital outlay on the Major Works in operation was Rs. 6,43,16,069* up to the end of March 1902. Their total length during the period under review remained the same, viz., 748 miles. Of this length, 495¼ miles were both for irrigation and navigation, 223¾ miles for irrigation only, and 29 miles for navigation only. There was an increase of 19½ miles in the total length of distributaries, which now stands at 2,634 miles. The total area irrigable at the end of the triennial period was 1,416,374 acres.

On the Protective Works in progress the capital outlay (direct charges) incurred during the period under review was Rs. 4,39,907. Their total length, as estimated, is 78½ miles, and the area irrigable 127,500 acres.

Paragraphs 3 to 22 below will deal with the four **Major Works** in operation, viz., the Orissa, Midnapore, Hijili Tidal and Sone Canals, while paragraphs 23 to 31 will treat of the canals classed as **Minor Works** only.

3. The average receipts of the canal systems from all sources during the triennial period were Rs. 17,98,015 against the average working expenses of Rs. 13,00,301, showing an average net revenue of Rs. 4,97,714. This was less than the average net revenue for the period ending March 1899 by Rs. 63,111, but greater than that of the average for the period ending March 1896 by Rs. 3,95,938. Notwithstanding that the average working expenses were reduced by Rs. 1,10,317, the smaller surplus was entirely owing to the greater diminution in navigation receipts, caused by the opening of the Bengal-Nagpur and the Mogulserai-Gaya Railways.

4. The capital outlay up to the end of the year 1901-1902 on each of the canal systems and the financial results during the period under review are shown in the following statement:—

Names of Canals.	Capital expenditure (direct and indirect) to end of 1901-1902.	Average receipts during the triennial period ending March 1902 (less refunds).	Average expenditure during the triennial period ending March 1902, including indirect charges.	Average net income of the triennial period ending March 1902.	Average net income of the triennial period ending—	
					March 1899.	March 1896.
1	2	3	4	5	6	7
Major Works in operation.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Orissa Canals ...	2,64,83,501	3,98,994	4,51,297	− 52,303	− 13,504	− 1,22,226
Midnapore Canal ...	84,74,988	2,37,273	2,08,503	+ 28,770	+ 11,305	+ 51,319
Hijili Tidal Canal ...	26,15,154	49,470	35,697	+ 13,773	+ 42,358	+ 4,791
Sone Canals ...	2,67,42,426	11,12,278	6,04,804	+ 5,07,474	+ 5,20,666	+ 1,67,892
Total ...	6,43,16,069	17,98,015	13,00,301	+ 4,97,714	+ 5,60,825	+ 1,01,776

* Includes Rs. 17,55,652 on account of indirect charges.

In the table below the average financial results of the canals during the period under review are compared with those of the five previous periods :—

Particulars.	Average of the triennial periods ending—					
	March 1902.	March 1899.	March 1896.	March 1893.	March 1890.	March 1887.
1	2	3	4	5	6	7
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Receipts from all sources (less refunds).	17,98,015	19,71,443	15,64,287	16,07,032	13,24,244	14,14,609
Working expenses (including indirect charges).	13,00,301	14,10,618	14,62,511	14,51,821	14,93,944	12,67,281
Net revenue	4,97,714	5,60,825	1 01,776	1,55,211	(−) 1,69,700	1,47,328
Charges for interest ...	25,00,725	24,97,888	24,79,424	24,15,282	23,39,112	22,56,780

The canals rather more than pay their working expenses, but the net revenue does not go far towards paying the interest charges; the financial results are, however, improving, and with the prospects of enhanced water-rates will continue to improve.

5. The following statement shows the average areas irrigated by the Orissa, Midnapore and Sone Canals during the triennial period under review and the two previous periods :—

Year.	Orissa Canals.	Midnapore Canal.	Sone Canals.			All Canals.	Rainfall.
			Kharif, inclusive of hot weather.	*Rabi*.	Total.		
1	2	3	4	5	6	7	8
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Inches.
1893-94	103,526	85,763	300,318	66,458	366,776	556,065	64·03
1894-95	122,561	70,116	275,470	41,664	317,134	509,811	58·15
1895-96	119,460	65,251	279,879	115,343	395,222	579,933	46·05
Triennial average ...	115,182	73,710	285,222	74,489	359,711	548,603	56·08
1896-97	185,048	65,183	339,766	215,390	555,156	805,387	50·51
1897-98	195,602	72,206	330,074	103,371	433,445	701,253	52·70
1898-99	194,847	76,578	330,761	110,035	440,796	712,221	55·36
Triennial average ...	191,832	71,322	333,534	142,932	476,466	739,620	52·86
1899-1900	200,828	72,105	330,795	123,293	454,093	727,026	59·73
1900-1901	203,540	80,330	341,429	90,984	432,413	716,283	60·53
1901-1902	201,498	82,134	362,081	195,413	557,494	841,126	43·77
Triennial average ...	201,955	78,190	344,768	136,565	481,333	761,478	54·67

There is very little *rabi* irrigation from the Orissa and Midnapore Canals. Of the average areas irrigated from the Sone Canals under *kharif* during the last nine years, the season leases only averaged 18 per cent. of the total, the balance of the area irrigated being under long lease for seven years.

The areas irrigated are increasing every year. This shows that the people in the districts commanded by the Sone Canals are realizing more and more the benefits of canal irrigation, which assures them a bumper crop in time of drought and an increased outturn in years of ordinary rainfall.

In the famine year of 1896-97 and in 1901-1902 it is estimated that not less than 33 and 35 lakhs of maunds of grain were added to the food-supply of Bihar by these canals.

6. The progress made in the collection of water-rates during the triennial period under review and the two previous triennia is exhibited in the following table:—

Year.	Balance at the beginning of the year.	Total demand of the year.	Cash realizations of the year.	Remissions.	Irrecoverable items.	Balance at the end of the year.	Certificates issued during the year.
1	2	3	4	5	6	7	8
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1899-1900 ...	5,718	13,71,061	13,65,741	3,726	466	1,128	988
1900-1901 ...	1,128	14,51,307	14,46,100	4,501	508	198	876
1901-1902 ...	198	14,41,424	14,32,901	1,506	89	6,928	693
Triennial average	2,348	14,21,263	14,14,914	3,244	354	2,751	852
Triennial average for the period ending March 1899.	32,860	14,24,471	13,96,985	1,108	12,281	14,097	2,504
Triennial average for the period ending March 1896.	1,68,636	12,65,327	10,97,193	57,501	4,902	1,05,731	7,560

This table is instructive showing, as it does, that the very small outstanding balance at the end of the year continues to be one of the satisfactory features of the administration of these Canals. Excluding the sum of Rs. 6,141, which was uncollected in the Orissa Circle owing to a certain number of leases having been received late in March, the outstanding balance, out of a demand of Rs. 14,41,424, was only Rs. 787. This in itself is eminently satisfactory, but the decrease in the number of certificates and the small amount of irrecoverable items all clearly indicate, not only the excellent work done by the collecting establishment, but also the accuracy of the measurements made by the Canal Officers on which the demand statements are prepared.

7. The navigation receipts during the triennial period under review and the two previous periods are shown below:—

Year.	Orissa Canals.	Midnapore Canal.	Hijili Tidal Canal.	Sone Canals.	Total.	Miles open.	Tollage per mile.
1	2	3	4	5	6	7	8
	Rs.	Rs.	Rs.	Rs.	Rs.	Miles.	Rs.
1899-1900	99,740	89,789	51,796	85,526	3,26,851	524¼	623
1900-1901	90,138	97,730	45,472	36,247	2,69,587	524¼	514
1901-1902	78,153	89,835	45,909	23,571	2,37,468	524¼	453
Triennial average ...	89,344	92,451	47,725	48,448	2,77,968	524¼	530
Triennial average for the period ending March 1899.	1,52,916	1,30,044	84,675	71,513	4,39,148	524¼	838
Triennial average for the period ending March 1896.	1,19,291	1,31,468	58,658	50,422	3,59,839	524¼	686

The above statement is interesting, but it is also disappointing as it brings to notice the very marked decrease of revenue under navigation.

In the previous triennial period, the average receipts were the highest on record, and were due, in a great measure, to the large quantities of building materials which were boated along the canals for the adjoining railways then under construction. It is the opening of these same railways to traffic, viz., the Bengal-Nagpur and Mogulsarai-Gaya Railways, which has caused this great loss of revenue from navigation.

The receipts in 1901-1902 were barely one-half of what they were in 1895-1896, and unfortunately they continue to show a steady decrease each year. This is the more astonishing, as it has hitherto been an accepted fact that railways could never compete successfully with canals for the carriage of goods.

On the Sone canals the diminution of traffic is not surprising, as navigation never made much progress either in the Shahabad or Patna district. On the other canals, the results are very disappointing, inasmuch as, although it was foreseen that the pilgrim traffic to Puri would take to the railway, it was assumed that the canals would still retain the goods traffic. The whole question is under examination, and the Government of India will shortly be addressed on the subject.

8. The average miscellaneous revenue for the triennial period under review was Rs. 94,959 against the average of Rs. 92,010 during the previous period.

9. On the **Orissa Canals** the capital outlay incurred during the period under review amounted to Rs. 1,05,941. This sum was expended mainly on the construction of permanent outlets on distributaries, and on the Dudhai Canal.

10. The average receipts were Rs. 3,98,994, or Rs. 97,794 less than the average of the previous triennial period. The decrease took place under both water-rates and navigation. The falling off under navigation alone was more than Rs. 85,000. It was mainly due to the opening of the Bengal-Nagpur Railway and the consequent abolition of the transport service.

11. The average area irrigated was 201,955 acres, or 10,123 acres more than the average of the previous period. The increase took place under *kharif*.

12. The average working expenses during the last three years were Rs. 4,51,297 against Rs. 5,10,292 and Rs. 4,97,064, the averages for the two previous triennial periods. The decrease in the working expenses was due to there being no heavy flood damage repairs since no high floods occurred in the rivers.

13. Notwithstanding the decrease in the working expenses, the net result was a deficit of Rs. 52,303 against a deficit of Rs. 13,504 in the previous period. This was due mainly to the compitition of the Bengal-Nagpur Railway already referred to.

14. On the **Midnapore Canal** there was a great reduction in the working expenses during the period under review. This was due partly to the absence of high floods in any of the rivers crossed by the canal, and partly to the withdrawal of the daily mail steamer service from 1st January 1901, owing to the opening of the Bengal-Nagpur Railway. With the cessation of the steamer service it was no longer necessary to dredge the entrance channels to the locks, or to revet the canal banks, in order to protect them from the wash caused by the steamers.

There was some improvement in the collection of water-rates, the average having increased to Rs. 1,23,812 against the average of Rs. 1,09,360 in the previous period. The navigation receipts, however, showed a considerable falling off, the average for the triennial period under review being Rs. 92,451

against Rs. 1,30,044 and Rs. 1,31,468, the averages for the two previous periods. The cause of the great decrease has already been explained. The average net revenue for the period ending March 1902 was Rs. 17,465 in excess of that for the preceding period, and was in great measure due to the abolition of the steamer service whereby great savings were effected in the maintenance of the canal. The capital outlay incurred was Rs. 9,223, of which Rs 8,000 were expended on the purchase of an office and residence for the Executive Engineer, Cossye Division, and Rs. 1,223 on the construction of permanent outlets to improve the water distribution.

15. The area irrigated, which was mostly under *kharif*, increased from an average of 73,710 acres in the three years ending March 1896 to an average of 78,190 acres in the triennial period under review. The *rabi* irrigation is very small. The area under long-term leases in 1901-1902 was 81,784 acres. This exceeded the maximum area of 75,000 acres as laid down in the revised water-rate rules for the Midnapore Canal.

16. The number of certificates issued during the triennial period shows a marked improvement compared with the number issued during 1898-1899.

17. The traffic on the **Hijili Tidal Canal** suffered considerably owing to the opening of the Bengal-Nagpur Railway. The average receipts from navigation decreased from Rs. 84,675 during the triennial period ending March 1899 to Rs. 47,725 during the period under review, the result being a reduction in the average net revenue from Rs. 42,358 to Rs. 13,773. There was a slight improvement in the working expenses

18 On the **Sone Canals** Rs. 24,070 were spent on works chargeable to the Capital Account, but the net outlay shown in the accounts, owing to sales of plant, was a *minus* figure [Rs. (—) 18,833].

19. The receipts from all sources averaged Rs. 11,12,278 against Rs. 11,28,616, the average for the previous period. The decrease was mainly under navigation receipts, which fell from Rs. 87,999, the average for the triennial period ending March 1899, to Rs. 48,832, the average for the period under review. The decrease was mainly due to the opening and competition of the Mogulserai-Gaya Railway. The receipts from water-rates increased from Rs. 10,09,662, the average for the triennial period ending March 1899, to Rs. 10,26,459, the average for the period ending March 1902.

There was a slight improvement in the miscellaneous revenue.

20. The rainfall of the year 1899-1900, though above the average, on the whole was deficient and unseasonable during the *kharif* season. In the early part of October, during the *hathiya*, there was no rain, and none fell till the end of the month. In the *rabi* season the rainfall in January was very beneficial to the crop. The rainfall of the year 1900-1901, though below the average and much less than that in the previous year, was heavier during both the *kharif* and *rabi* seasons. The year 1901-1902 was one of very scant rainfall—in fact the lowest on record since 1877-1878. It was deficient in the *kharif* season, and consequently there was a brisk demand for canal water during the rice transplanting season and the *hathiya* as well. Very little rain fell during the *rabi* season, the result being that a much larger area was leased than is ordinarily the case.

21. The area irrigated during the year 1901-1902, viz., 557,494 acres was the maximum on record. It exceeded the previous maximum of 1896-1897 by 2,338 acres. The average area irrigated was 481,333 acres against 476,466 acres in the previous period. The increase took place mainly under *kharif*, while there was a decrease under *rabi* and hot-weather irrigation. Compared with the average for the period ending March 1896, the average for the period under review was better by 121,622 acres, a result which shows that the people do appreciate the benefits of canal irrigation. This is also proved by the fact that the area under long term leases has gradually increased, the average for the triennial period under review being 313,011 acres against 297,544

and 271,552 acres for the periods ending March 1899 and March 1896, respectively.

22. The working expenses averaged Rs. 6,04,804 or Rs. 3,146 less compared with the average of the previous period. The net result of the working of the triennial period under review was a profit of Rs. 5,07,474, which is equivalent to a percentage of 1·89 on the capital outlay.

23. The capital outlay (direct and indirect charges) on canals classed a **Minor Works and Navigation** was Rs. 2,86,724 during the period under review and Rs. 1,27,48,403* up to the end of this period. The average receipts and working expenses amounted to Rs. 6,05,205 and Rs. 4,98,763 respectively, the net revenue being Rs. 1,06,442 against Rs. 1,21,913, the average for the period ending March 1899.

The financial results of each of the canals during the triennial period and the capital expenditure to date are exhibited in the following table:—

	Capital expenditure (direct and indirect)—		Average receipts of the triennial period, less refunds.	Average expenditure of the triennial period, including indirect charges.	Average net increase of the triennial period.	Average net increase of the triennial periods ending—	
	Of the triennial period.	To end of the triennial period.				March 1899.	March 1896.
1	2	3	4	5	6	7	
Minor Works and Navigation.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Calcutta and Eastern Canals	3,43,357	68,04,609	4,23,132	2,66,435	1,56,697	1,87,527	1,50,251
Orissa Coast Canal	(—) 53,032	44,79,380	48,896	67,365	— 18,469	4,523	— 1,496
Saran Canals	(—) 1	7,06,559	1,375	3,309	— 1,934	— 6,599	— 1,047
Nadia Rivers	.....	.....	99,263	1,17,345	— 18,082	— 22,389	— 274
Eden Canal	.....	.....	27,653	38,256	— 10,603	— 37,926	— 20,674
Madhuban Canal	.....	.....	158	5,805	— 5,647	— 7,132	— 6,617
Gaighata and Baxi khal	.....	.....	4,277	245	4,032	3,909	— 11,955
Total ...	2,90,324	1,19,90,548	6,04,754	4,98,760	1,05,994	1,21,913	1,08,188

* Includes the amount expended on the Tirhut and Damodar Projects.

24. The **Calcutta and Eastern Canals** are a series of navigable channels, partly natural and partly artificial, connecting Calcutta with the Eastern Districts of Bengal. The average receipts and working expenses amounted to Rs. 4,23,132 and Rs. 2,66,435, respectively, the result being a profit of Rs. 1,56,697 against Rs. 1,87,527 in the previous triennial period. The decrease was due to a falling off in the navigation receipts during the two years, 1900-1901 and 1901-1902. The average number of boats using the canals during the triennial period under review was 125,008 against 123,584 in the preceding period.

25. In order to provide a shorter and easier route for steamers during the rainy season, certain improvements of the Madaripore *bhil* route between the rivers Kumar and Madhumati from Khulna to Madaripore in the district of Faridpur were undertaken during the latter end of the year 1899-1900. The capital expenditure during the years 1900-1901 and 1901-1902 was solely incurred on the improvement of this route. Three estimates for the project have been sanctioned to date. The first estimate was for a channel about 22 miles in length to connect the Kumar and Madhumati rivers. This has shortened the distance between Khulna and Madaripore by 89 miles. The second estimate was for widening the route, and the third for deepening it by two feet throughout, for the purpose of allowing steamers and flats drawing six feet of water to use the route during the jute season only between August and

September. Works in connection with the first estimate have been completed; those for widening and deepening the route are in progress. The question of still further improving the channel so as to make it navigable throughout the year is under consideration.

26. The **Orissa Coast Canal** is a continuation of the Hijili Tidal Canal and is for navigation purposes only. The average receipts for the triennial period under review amounted to Rs. 48,896 against Rs. 81,562 in the preceding period. This great falling off is mainly due to (1) the opening of the Bengal-Nagpur Railway to which most of the *rice* and other goods traffic have been diverted owing to the very low rates charged by the Railway, and (2) the consequent withdrawal by the steamer companies of their steamers since February 1900. The working expenses, however, were much reduced during the last two years, and the average for the triennial period under review showed a decrease of Rs. 9,674 compared with the average for the preceding period. The financial results are far from satisfactory, the average net revenue being a deficit of Rs. 18,469 against a profit of Rs. 4,523 in the preceding triennial period.

27. The **Saran Canals** practically remained closed during the past three years. They were opened for a short time only during the *kharif* and *rabi* seasons of the years 1900-1901 and 1901-1902 owing to the great demand for water caused by the scanty rainfall in the district commanded by them. The water was given free of charge at the request of the Collector and under the sanction of Government.

28. The work in the **Nadia Rivers** consists of the improvement and maintenance of the main offshoots from the Ganges, viz., the Bhagirathi, Bhairub, Jalangi, and Mathabhanga rivers. These rivers have been steadily losing their position as a great trade route to Calcutta, and with the prospect of increased railway competition it is probable that they will still further decline in importance. It is intended to improve the head of the Bhagirathi by means of a powerful suction dredger with the object of rendering the river navigable for a longer time during the cold-weather months, but, until the experiment is made, it would be futile to attempt to predict what the result will be. The receipts averaged Rs. 99,263 during the triennial period under review against Rs. 90,644 in the preceding period. Compared with the average for the period ending March 1896 the receipts show a falling off of Rs. 45,069. The average working expenses for the two periods were Rs. 1,17,345 and Rs. 1,13,033 respectively, so that the net revenue was a deficit of Rs. 18,082 for the period ending March 1902 compared with a deficit of Rs. 22,389 in the preceding period. For the triennial period ending March 1893 the average profit was Rs. 68,432. This steady decline in revenue is due to the deterioration of the rivers and also to the competition of the railways.

29. The **Gaighata and Buxi Khal** was maintained during the triennial period at an average cost of Rs. 235. The lease of the right to collect tolls expired at the close of the year 1900-1901. It was renewed for another five years on the original term, viz., Rs. 4,500 per annum.

30. The **Eden Canal** was worked during the triennial period at a smaller loss than usual. The average receipts were Rs. 27,653 against Rs. 33,698 in the preceding triennial period. The working expenses amounted to Rs. 38,256 against Rs. 71,624, the net result being a reduction in the average deficit from Rs. 37,926 to Rs. 10,603, which was entirely due to the fact that there was no expenditure on original works.

The area irrigated during the triennial period averaged 27,494 acres against 25,179 acres, the average of the preceding period.

31. The average area irrigated from the **Madhuban Canal** was 3,128 acres against 5,480 acres in the previous period. The average outlay incurred for maintaining the canal was Rs. 5,805 against Rs. 7,277 in the previous period. No charge is made for water given for irrigation from the canal.

32. An abstract of the result of the experiments made on "average" rice crops in the irrigated and unirrigated lands and the value of the outturn per acre during the triennial period under review is given below:—

Canals.	Average yield per acre weighed dry.				Value of outturn to cultivators per acre from—				Rate per rupee.
	Irrigated land.		Unirrigated land.		Irrigated land.		Unirrigated land.		
	Paddy.	Straw.	Paddy.	Straw.	Rice.*	Straw.	Rice.*	Straw.	
1	2	3	4	5	6	7	8	9	10
1899-1900.	Mds.	Mds.	Mds.	Mds.	Rs.	Rs.	Rs.	Rs.	
Orissa Canals	24¼	41	18¼	35	39	4	28	4	Rice 17 seers. Straw 9 maunds.
Sone do.	22¾	38	16¾	30¼	26	5	18	4	Rice 24 seers. Straw 8 maunds.
Midnapore Canal ...	19	38	17½	36	32	6	29	6	Rice 16 seers. Straw 6 maunds.
Eden do. ...	31¾	41¼	20¼	27½	67	14	43	9	Rice 12½ seers. Straw 3 maunds.
1900-1901.									
Orissa Canals	26	47	20½	30	38	5	32	3	Rice 17 seers. Straw 9 maunds.
Sone do.	19¾	34	14½	26	24	4	17	3	Rice 22 seers. Straw 8 maunds.
Midnapore Canal ...	21	38	14½	28	39	7	26	6	Rice 14 seers. Straw 5 maunds.
Eden do. ...	28¼	49½	14½	22½	59	25	30	11	Rice 12¾ seers. Straw 2 maunds.
1901-1902.									
Orissa Canals	23	42	16	34	29	5	20	4	Rice 20 seers. Straw 9 maunds.
Sone do.	21	36	12¾	24	31	12	19½	8	Rice 18 seers. Straw 3 maunds.
Midnapore Canal ...	22¾	41	17¼	31½	51	9	40½	6¾	Rice 11 seers. Straw 4⅞ maunds.
Eden do. ...	24¼	45½	18¾	29½	57	30	44	20	Rice 11¼ seers. Straw 1½ maunds.

* Rice = ⅔rds of paddy.

In 1901-1902 the rainfall in the month of October was scanty, so that where canal irrigation was not available the rice crop was below an average crop. If the differences in value for that year are compared, it is seen that the increased value of the outturn of crops due to irrigation was Rs. 10 from the Orissa Canals, Rs. 15 from the Sone Canals, Rs. 13 from the Midnapore Canal and Rs. 23 from the Eden Canal. The great difference of value on the Eden Canal is due to the high price obtained for straw in the Hooghly district.

33. The Irrigation Department of this Province was in charge of Mr. R. B. Buckley, C.S.I., Chief Engineer, during the triennial period under review. He has since retired from the Public Works Department having served in it for 32 years. The Lieutenant-Governor has recorded his appreciation of the work done by Mr. Buckley in the *Calcutta Gazette* of the 5th March 1902.

The Superintending Engineers, Mr. Inglis, Mr. Lees, Mr. Toogood and Mr. Butler were in charge of the four Irrigation Circles. The Lieutenant-Governor acknowledges the efficiency of their services. The large reduction

in the expenditure on repairs during the last three years in the Midnapore Canal is due to the able management of Mr. C. A. White, Executive Engineer.

ORDER.—Ordered that a copy of this Resolution and of the Chief Engineer's note be submitted to the Government of India, in the Public Works Department, and published in the *Calcutta Gazette*; also that it be circulated to other Governments and to all Governments and to all Departments and officers of this Government as usual.

By order of the Lieutenant-Governor of Bengal,

D. B. HORN,

Secy. to the Govt. of Bengal.

Government of Bengal.

IRRIGATION DEPARTMENT.

REVENUE REPORT.

Note by D. B. Horn Esqr., Chief Engineer, on the Canal Revenue Reports of Bengal for the triennial period ending 31st March 1902.

THIS is the first triennial revenue report prepared in accordance with the orders of the Government of India, conveyed in their Resolution No. 670C.W.I., dated the 6th June 1901. The tables introduced by the Chief Engineer for the preparation of the report were approved by the Government of India in their letter No. 1136C.W.I., dated the 2nd October 1901.

Previous to the year 1899-1900 two annual reports were prepared in the Irrigation Department—one being the Irrigation Chapter of the Administration Report and the other the Canal Revenue Report. With a view to reducing the number and bulk of the Revenue Reports on Irrigation Works, and facilitating their earlier submission, the Inspector General of Irrigation in a note, dated the 18th June 1900, recommended—

(1) that the Annual Revenue Report should consist of a brief administration report, together with the statistical statements of irrigation works prescribed by the Secretary of State, and the administrative accounts of irrigation works,

(2) that other statistical information relating to the working of the canals, of which it may be important to maintain a permanent and continuous record, should be embodied in a triennial report, in which the results attained in successive periods on the different systems may be brought into effective comparison.

These recommendations were accepted by the Government of India, and only one annual report is being issued since 1899-1900 in place of two annual reports.

2. The canals in Bengal are for irrigation and navigation purposes and they are divided into two classes, *viz.*:—Major Irrigation Works, and Minor Works and Navigation.

The Major Irrigation Works are—

The Orissa canals.	The Sone canals.
,, Midnapore canal.	,, Tribeni canal.
,, Hijili Tidal canal.	,, Dhaka canal.

and the Minor Works and Navigation are—

The Calcutta and Eastern canals.	The Eden canal.
,, Orissa Coast canal.	,, Madhuban canal.
,, Saran canals.	,, Tirhut project.
,, Nadia rivers.	,, Damodar project.
,, Gaighatta and Buxi khals.	

The Orissa, Midnapore and Sone canals are both for irrigation and navigation, while the Hijili Tidal canal is for navigation only.

The Tribeni and Dhaka canals are for irrigation only. They were sanctioned in the year 1900-01 and are now under construction. Under Minor Works, the Calcutta and Eastern canals, Orissa Coast canal, Nadia rivers and Gaighatta and Buxi khal are for navigation only, and the Saran canals, Eden Canal and Madhuban canal are for irrigation. The Tirhut project was designed for irrigation and the Damodar project for navigation. After some expenditure had been incurred, mostly on preliminary operations, it was considered advisable by Government to close the construction estimates of both projects.

The work on the Tirhut project has, therefore, been kept in abeyance since 1877-78, and that on the Damodar project was abandoned in 1871-72.

3. The Capital Account and financial results of the canals classed as Major Irrigation Works in operation up to end of the year 1901-1902 are shown in the following statements:—

(I) CAPITAL ACCOUNT.

Head of Account.	Outlay to end of March 1899.	Outlay during—			Outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
MAJOR IRRIGATION WORKS.	Rs.	Rs.	Rs.	Rs.	Rs.
In Operation.					
Direct Charges.					
Works	4,48,35,787	51,496	35,067	38,069	4,49,60,419
Establishment	1,24,10,450	9,773	7,586	8,335	1,24,36,144
Tools and plant ...	53,16,131	(—)19,249	(—)1,031	145	52,95,996
Suspense	35	(—)35	...	...	...
Loss by exchange ...	4,37,900	...	...	...	4,37,900
Total ..	6,30,00,303	41,985	41,622	46,549	6,31,30,459
Less—Receipts on Capital Account ...	5,36,428	3,371	...	30,243	5,70,042
Total direct charges ...	6,24,63,875	38,614	41,622	16,306	6,25,60,417
Indirect charges ...	17,50,443	1,567	1,611	2,031	17,55,652
Total outlay, direct and indirect	6,42,14,318	40,181	43,233	18,337	6,43,16,069

(II) FINANCIAL RESULTS.

Item.	Particulars.	Average of triennial period ending—		Period under review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
	MAJOR IRRIGATION WORKS.	Rs.	Rs.	Rs.	Rs	Rs.	Rs.
	In Operation.						
	RECEIPTS.						
1	Water-rates	10,97,192	13,96,952	13,65,741	14,46,100	14,32,901	14,14,914
2	Navigation	3,92,684	4,95,393	3,75,670	2,70,194	2,37,492	2,94,452
3	Miscellaneous	80,784	92,010	88,323	90,037	1,06,518	94,959
	Total ...	15,70,660	19,84,355	18,29,734	18,06,331	17,76,911	18,04,325
	Less—Refunds of revenue ...	6,373	12,912	8,046	6,879	4,005	6,310
4	Total Receipts	15,64,287	19,71,443	18,21,688	17,99,452	17,72,906	17,98,015
	WORKING EXPENSES.						
	DIRECT CHARGES.						
	I.—Works.						
5	Extensions and improvements ...	41,049	37,219	44,895	47,370	34,991	42,419
6	Maintenance and repairs	5,63,508	5,03,316	4,81,905	3,84,068	3,57,099	4,07,691
7	Establishment (Direction and Accounts and Executive)	3,87,194	4,02,893	4,06,138	4,22,556	4,00,115	4,09,601
8	Tools and plant	98,186	73,436	81,236	44,655	58,304	61,598
	Total ...	10,89,437	10,16,864	10,14,174	8,98,643	8,51,109	9,21,309
	II.—Revenue management.						
9	Irrigation establishment	2,36,506	2,50,325	2,40,525	2,40,849	2,37,150	2,39,508
10	Navigation ditto	43,202	45,583	44,962	42,206	40,372	42,513
	Total ...	2,79,708	2,95,908	2,85,487	2,83,055	2,77,522	2,82,021
11	Total Direct Charges	13,69,145	13,12,772	12,99,661	11,81,698	11,28,631	12,03,330
	INDIRECT CHARGES						
12	Capitalised abatement of land revenue	...	14	4	357	72	144
13	Leave and pension allowance	93,366	97,832	96,827	98,785	94,869	96,827
	Total ...	93,366	97,846	96,831	99,142	94,941	96,971
14	Total working expenses (direct and indirect)	14,62,511	14,10,618	13,96,492	12,80,840	12,23,572	13,00,301
15	Net revenue	1,01,776	5,60,825	4,25,196	5,18,612	5,49,334	4,97,714
16	Capital outlay (direct and indirect) ...	6,39,12,873	6,41,99,423	6,42,54,499	6,42,97,752	6,43,16,069	6,42,89,433
17	Percentage of net revenue on capital outlay	0·16	0·87	0·66	0·81	0·85	0·77
18	Area irrigated ... ... acres	548,603	739,626	727,624	716,283	841,126	761,478
19	Average water-rate (item 1) per acre irrigated	1·99	1·89	1·88	2·02	1·70	1·85
20	Total Irrigation establishment charges (items 7+9) per acre irrigated ...	1·14	0·88	0·89	0·92	0·76	0·85
21	Working expenses (direct and indirect) per acre irrigated	2·67	1·91	1·92	1·79	1·45	1.70

4. The Capital Account of the Tribeni and Dhaka Canal Projects in progress is given below:—

Head of account.	Outlay to end of March 1900.	Outlay during—		Outlay to end of March 1902.
		1900-1901.	1901-1902.	
1	2	3	4	5
MAJOR IRRIGATION WORKS.	Rs.	Rs.	Rs.	Rs.
35.—CONSTRUCTION OF PROTECTIVE IRRIGATION WORKS.				
IN PROGRESS.				
Direct charges.				
Works	1,20,835	9,711	1,05,869	2,36,415
Establishment	21,281	(−)342	42,751	63,690
Tools and plant	...	1,570	1,15,522	1,17,092
Suspense	...	...	22,871	22,871
Loss by Exchange	...	...	...	...
Total	1,42,116	10,939	2,87,013	4,40,068
Less—Receipts on Capital Account	...	44	117	161
Total direct charges	1,42,116	10,895	2,86,896	4,39,907
Indirect charges	2,980	−48	5,985	8,917
Total outlay, direct and indirect	1,45,096	10,847	2,92,881	4,48,824

5. The Capital Account and financial results of the canals classed as Minor Works and Navigation up to end of the year 1901-1902 are given below:—

Works for which Capital and Revenue Accounts are kept.

(I) CAPITAL ACCOUNT.

Head of account.	Outlay to end of March 1899.	Outlay during—			Outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Direct charges.	Rs.	Rs.	Rs.	Rs.	Rs.
Works	94,98,749	20,751	1,33,641	1,22,696	97,75,837
Establishment	20,34,582	4,254	30,747	24,412	20,93,995
Tools and plant	6,62,828	205	(−)65	−925	6,62,043
Suspense	59,609	−54,739	2,447	−1,418	5,899
Loss by Exchange	847	.....	.....	.....	847
Total	1,22,56,615	−29,529	1,66,770	1,44,765	1,25,38,631
Less—Receipts on Capital Account	1,11,865	1,200	1,200	1,200	1,15,465
Total direct charges ...	1,21,44,750	−30,729	1,65,570	1,43,565	1,24,23,156
Indirect charges	3,16,929	595	4,305	3,418	3,25,247
Total outlay, direct and indirect ...	1,24,61,679	−30,134	1,69,875	1,46,983	1,27,48,403

NOTE—The canals for which Capital and Revenue Accounts are kept are—the Tirhut and Damodar Projects (in abeyance and abandoned); the Calcutta and Eastern canals, the Orisa Coast canal and the Saran canals. (in operation.)

* This is the correct figure arrived at after adjusting the expenditure of Rs. 15,028 on the Saran Canals.

(II) FINANCIAL RESULTS.

Item.	Particulars.	Average of triennial period ending—		Period under review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
	1	2	3	4	5	6	7
	RECEIPTS.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1	Water-rate	2,947	2,523	1,370	−17	.....	451
2	Navigation	5,05,946	4,86,725	4,90,278	4,57,977	4,17,100	4,55,118
3	Miscellaneous	18,315	22,140	18,185	19,223	17,140	18,183
	Total	5,27,208	5,11,388	5,09,833	4,77,183	4,34,240	4,73,752
4	*Less*—Refunds of revenue	2,014	1,857	809	137	101	349
	Total receipts	5,25,194	5,09,531	5,09,024	4,77,046	4,34,139	4,73,403
	WORKING EXPENSES.						
	DIRECT CHARGES.						
	I.—Works.						
5	Extensions and improvements ...	5,299	23,183	(−)16,645	761	2,904	(−)4,326
6	Maintenance and repairs	2,18,379	1,86,041	1,99,558	1,90,280	1,71,510	1,87,116
7	Establishment (Direction and Accounts and Executive).	69,168	28,570	79,217	50,741	55,187	61,715
8	Tools and plant	21,481	29,478	31,149	19,717	37,744	29,536
	Total	3,14,327	2,67,272	2,93,279	2,61,499	2,67,345	2,74,041
	II.—Revenue management.						
9	Irrigation establishment	.....	.....	.....	.....	.....	.....
10	Navigation ditto	46,909	46,323	47,966	48,918	46,346	47,743
	Total	46,909	46,323	47,966	48,918	46,346	47,743
	Total direct charges	3,61,236	3,13,595	3,41,245	3,10,417	3,13,691	3,21,784
	Indirect charges	16,251	10,485	17,806	13,953	14,214	15,324
12	Total working expenses (direct and indirect.	3,77,487	3,24,080	3,59,051	3,24,370	3,27,905	3,37,108
13	Net revenue	1,47,707	1,85,451	1,49,973	1,52,676	1,06,234	1,36,295
14	Capital outlay (direct and indirect)*	1,05,32,512	1,14,89,870	1,16,71,290	1,18,42,365	1,19,90,548	1,18,34,735
15	Percentage of net revenue on Capital outlay.	1·40	1·61	1·28	1·28	0·88	1·15

* Exclusive of the outlay incurred in the Tirhut and Damodar projects.

Works for which only Revenue Accounts are kept.

PARTICULARS.	AVERAGE OF TRIENNIAL PERIOD ENDING—		PERIOD UNDER REVIEW.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Navigation	1,45,897	94,909	1,14,502	1,05,302	90,085	1,03,296
Miscellaneous	436	245	819	108	239	389
Total	1,46,333	95,154	1,15,321	1,05,410	90,324	1,03,685
Less—Refunds of revenue	20	15	32	87	316	145
Total Receipts	1,46,313	95,139	1,15,289	1,05,323	90,008	1,03,540
WORKING EXPENSES.						
DIRECT CHARGES.						
I.—Works.						
Extensions and improvements	.....	77	.....	6,226	.....	2,075
Maintenance and repairs	83,269	55,322	51,660	59,585	65,467	58,904
Establishment (Direction and Accounts and Executive).	37,641	25,694	30,179	31,120	15,231	25,510
Tools and plant	1,633	1,717	1,955	1,417	1,154	1,508
Total	1,22,543	82,810	83,794	98,348	81,849	87,997
II.—Revenue management.						
Navigation establishment	26,956	23,870	22,527	22,944	23,007	22,826
Total direct charges	1,49,499	1,06,680	1,06,321	1,21,292	1,04,856	1,10,823
Indirect charges	9,043	6,939	7,378	7,569	5,354	6,767
Total working expenses (direct and indirect)	1,58,542	1,13,619	1,13,699	1,28,861	1,10,210	1,17,590
Net revenue	(−)12,229	(−)18,480	1,590	(−)23,538	(−)20,202	(−)14,050

NOTE—The works for which only Revenue Accounts are kept are the Nadia Rivers and Gaighata and Buxi khal.

Works for which neither Capital nor Revenue Accounts are kept.

PARTICULARS.	AVERAGE OF TRIENNIAL PERIOD ENDING—		PERIOD UNDER REVIEW.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Water rate	32,127	33,632	25,842	26,540	27,806	26,729
Miscellaneous	619	598	1,202	1,000	1,230	1,144
Total	32,746	34,230	27,044	27,540	29,036	27,873
Less—Refunds of revenue	325	387	79	107	2	63
Total receipts	32,421	33,843	26,965	27,433	29,034	27,810
WORKING EXPENSES.						
New works	5,280	30,605	135	2,293	.....	809
Maintenance and repairs	37,420	27,102	30,149	28,187	31,818	30,051
Establishment	16,222	20,785	11,825	11,646	14,598	12,690
Tools and plant	712	409	444	541	550	512
Total	59,734	78,901	42,553	42,667	46,966	44,062
Net revenue	(−)27,313	(−)45,058	(−)15,588	(−)15,234	(−)17,932	(−)16,252

NOTE.—The works for which neither Capital nor Revenue Accounts are kept are the Eden Canal and Madhutan Canal.

6. The areas irrigated by the Major Irrigation Works during the triennial period under review and the two previous periods are shown in the following statement :—

	Orissa canals.			Midnapore canal.			Sone canals.			Total.		
	Kharif inclusive of hot-weather.	Rabi.	Total.	Kharif. inclusive of hot-weather.	Rabi.	Total.	Kharif inclusive of hot-weather.	Rabi.	Total.	Kharif inclusive of hot-weather.	Rabi.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Average for the triennial period ending March 1896...	110,211	4,971	115,182	71,581	2,129	73,710	285,222	74,489	359,711	467,014	81,589	548,603
Ditto ditto ditto ending March 1899	183,364	8,468	191,832	69,377	1,945	71,322	333,534	142,932	476,466	586,275	153,345	739,620
Year 1899-1900	197,441	3,387	200,828	71,398	707	72,105	330,795	123,298	454,073	599,634	127,392	727,026
,, 1900-1901	198,134	5,406	203,540	79,429	901	80,330	341,429	90,984	432,413	618,992	97,291	716,283
,, 1901-1902	199,168	2,330	201,498	81,868	266	82,134	362,081	195,413	557,494	643,117	198,009	841,126
Average of the triennial period ending March 1902	198,248	3,707	201,955	97,565	625	78,190	344,768	136,565	481,333	620,581	140,897	761,478

7. The results of the working of each of the canal systems of the Province during the triennial period will now be treated of separately.

MAJOR IRRIGATION WORKS.

ORISSA CANALS.

8. THE Capital outlay and other particulars of these Canals are given below :—

TABLE I.—CAPITAL ACCOUNT.

HEAD OF ACCOUNT.	Outlay to end of March 1899.	OUTLAYD URING--			Outlay to end of Mar. 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
	Rs.	Rs.	Rs.	Rs.	Rs.
DIRECT CHARGES.					
Works	1,88,53,980	32,332	26,248	32,764	1,89,45,319
Establishment	46,81,444	7,242	5,614	7,116	47,01,416
Tools and plant	20,71,667	— 674	173	126	20,71,292
Suspense	12	— 12	.....	.....	.....
Loss by exchange	2,68,070	.....	.....	.....	.....
Total	2,58,75,173	38,888	32,030	40,006	2,59,86,097
Less—Receipts on capital account ...	86,795	.....	.....	4,983	91,778
Total direct charges	2,57,88,378	38,888	32,030	35,023	2,58,94,319
Indirect charges	5,84,773	1,213	1,335	1,861	5,89,182
Total outlay, direct and indirect ...	2,63,73,151	40,101	33,365	36,884	2,64,83,501

The construction estimate of these canals is closed. The outlay during the triennial period under review, chargeable to the open Capital Account under the head 43—Minor Works and Navigation Provincial, was incurred mainly on the construction of permanent outlets, minor distributaries and drainage works. On the construction of the Dudhai Canal in the Cuttack District, an estimate for which amounting to Rs. 81,797 was sanctioned by the Government of India in October 1901 chargeable under the same head, Rs. 16,392 were expended during the year 1901-1902. The work is in progress.

9. TABLE II.—LENGTHS OF CHANNELS.

DESCRIPTION OF CHANNEL.	LENGTH OF CHANNEL IN MILES.				At end of Mar. 1902.
	At end of March 1899.	Increase or decrease during—			
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Navigable canals (both for irrigation and navigation) ... Miles	204¾	Nil	Nil	Nil	204¾
Branch canals (for irrigation only) ...	75	Nil	Nil	Nil	75
Distributaries (with minor channels) ...	1,101¼	+4¾	+17	+9¾	1,132¾
Village channels	Nil	Nil	Nil	Nil	Nil
Permanent outlets ... No.	559	+918	+538	+708	2,723
Temporary „ ... „	5,601	—768	—80	—6	4,747
Drainage channels ... Miles	279¾	Nil	11	Nil	290¾
Area protected from flood ... Acres	562,114	Nil	Nil	Nil	562,114
Gross area under command ... „	596,878	Nil	+914	Nil	597,792

There was no change in the lengths of the main and branch canals during the triennial period. In distributaries there was an increase of 31½ miles, owing to the construction of several minor channels. The increased length will supply water to lands not previously leased.

The permanent outlets increased from 559 to 2,723 and the temporary outlets decreased from 5,601 to 4,747. The drainage channels increased by 11 miles. In the area under command an addition of 914 acres was made in the year 1900-1901.

10. TABLE III.—FINANCIAL RESULTS.

Item.	Particulars.	Average of triennial period ending—		Period under review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
	1	2	3	4	5	6	7
	RECEIPTS.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1	Water-rates	2,09,247	2,77,963	2,67,083	2,87,812	2,39,035	2,64,643
2	Navigation	1,42,497	1,92,676	1,47,689	90,485	78,153	1,05,442
3	Miscellaneous	23,879	28,871	27,725	30,591	31,818	30,045
	Total ...	3,75,623	4,99,510	4,42,497	4,08,888	3,49,006	4,00,130
	Less—Refunds of revenue ...	785	2,722	1,440	743	1,224	1,136
4	Total Receipts ...	3,74,838	4,96,788	4,41,057	4,08,145	3,47,782	3,98,994
	WORKING EXPENSES.						
	DIRECT CHARGES.						
	I.—Works.						
5	Extensions and improvements	13,557	11,743	20,596	14,896	12,057	15,850
6	Maintenance and repairs ...	2,16,557	2,05,052	1,63,163	1,44,059	*1,41,182	1,49,468
7	Establishment (Direction and Accounts and Executive).	1,24,479	1,49,881	1,52,546	1,63,141	1,47,721	1,54,469
8	Tools and plant ...	27,132	22,850	26,683	16,367	14,405	19,152
	Total ...	3,81,725	3,89,526	3,62,988	3,38,463	3,15,365	3,38,939
	II.—Revenue management.						
9	Irrigation establishment ...	68,969	70,026	62,734	63,600	63,412	63,249
10	Navigation ditto ..	16,919	17,490	17,944	15,603	15,099	16,215
	Total ...	85,888	87,516	80,678	79,203	78,511	79,464
11	Total Direct Charges ...	4,67,613	4,77,042	4,43,666	4,17,666	3,93,876	4,18,403
	INDIRECT CHARGES.						
12	Capitalised abatement of land revenue.	...	14	4	357	72	144
13	Leave and pension allowances	29,451	33,236	32,651	33,928	31,672	32,750
	Total ...	29,451	33,250	32,655	34,285	31,744	32,894
14	Total working expenses (direct and indirect).	4,97,064	5,10,292	4,76,321	4,51,951	4,25,620	4,51,297
15	Net revenue	—1,22,226	—13,504	—35,264	—43,806	—77,838	—52,303
16	Capital outlay (direct and indirect).	2,61,20,830	2,63,04,107	2,64,13,252	2,64,46,617	2,64,83,501	2,64,47,790
17	Percentage of net revenue on capital outlay.	—0·47	—0·05	—0·13	—0 17	—0·29	—0·19
18	Area irrigated Acres ...	115,182	191,832	200,828	203,540	201,498	201,955
19	Average water-rate (item 1) per acre irrigated.	1·82	1·45	1·33	1·41	1·18	1·31
20	Total Irrigation establishment charges (items 7—9) per acre irrigated.	1·68	1·14	1·07	1·11	1·04	1·08
21	Working expenses (direct and indirect) per acre irrigated.	4·31	2·66	2·37	2·22	2·11	2·23

* Includes Rs. 371 on account of compensation.

There was a considerable decrease in navigation receipts owing mainly to the opening of the Bengal-Nagpur Railway and the consequent withdrawal of the Government transport service. The working expenses, however, showed a considerable falling off during the triennial period compared with the previous periods ending March 1896 and 1899. The decrease was mainly due to the absence of high floods in the rivers.

TABLE III(*a*)—INTEREST.

11. The interest charges for and up to the end of the triennial period are given below :—

	To end of March 1899.	Period under Review.			To end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
	1	2	3	4	5
Interest charges	Rs. 2,37,97,193	Rs 10,32,313	Rs. 10,33,692	Rs. 10,34,949	Rs. 2,68,98,147

12. TABLE IV.—RAINFALL.

	Averages of 13 stations.				Average of 18 years ending March 1902.
	Average of fifteen years ending March 1899.	Period under review.			
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
	Inches.	Inches.	Inches.	Inches.	Inches.
Kharif season — July ...	11·35	9·10	13·30	10·95	11·31
Kharif season — August ...	12·26	9·54	22·27	9·02	12·48
Kharif season — September ...	10·26	4·69	18·03	8·25	10·27
Kharif season — October ...	5·54	9·67	6·98	3·34	5·73
Total ...	39·41	33·00	60·58	31·56	39·79
Rabi season — November ...	2·20	Nil	0·03	7·57	2·25
Rabi season — December ...	0·15	0·06	0·01	Nil	0·13
Rabi season — January ...	0·32	Nil	1·75	0·17	0·37
Rabi season — February ...	0·75	0·40	2·61	Nil	0·80
Total ...	3·42	0·46	4·40	7·74	3·55
Whole year ...	58·71	54·50	75·85	46·91	58·78

The rainfall during the year 1901-1902 was considerably less than that of the previous year and the average of 18 years. It was, however, well distributed in the Cuttack District but not so in the Balasore District, which led to the wholesale renewal of leases of the large area which lapsed on the 31st March 1901 on the High Level Canal, Range III. The average rainfall recorded at nine stations in the Central Provinces, from which area of country the Mahanadi river derives the greater part of its supply, was 41·65 inches in 1901-1902, 68·08 inches in 1900-1901, and 37·66 inches in 1899-1900.

13. TABLE V.—AREAS IRRIGATED.

YEAR.	Kharif (inclusive of Hot-weather.)	Rabi.	Total.	RAINFALL.		
				Kharif season.	Rabi season.	Year.
1	2	3	4	5	6	7
	Acres.	Acres.	Acres.	Inches.	Inches.	Inches.
1893-94	100,622	2,904	103,526	38·05	0·29	74·83
1894-95	118,459	4,102	122,561	39·09	3·72	58·91
1895-96	111,551	7,909	119,460	38·63	0·41	63·12
Triennial average	110,211	4,971	115,182	38·59	1·47	65·62
1896-97	171,748	13,300	185,048	39·00	2·91	65·86
1897-98	188,587	7,015	195,602	42·73	1·91	55·99
1898-99	189,758	5,089	194,847	46·86	0·61	58 87
Triennial average	183,364	8,468	191,832	42·86	1·81	60·24
1899-1900	197,441	3,387	200,828	33·00	0·46	54 50
1900-1901	198,134	5,406	203,540	60·58	4·40	75·85
1901-1902	199,168	2,330	201,498	31·56	7·74	46·91
Triennial average	198,248	3,707	201,955	41·70	4·20	59·09

The average area irrigated during the triennial period under review was about 10,000 acres more than that of the previous period, and nearly double that of the period ended March 1896.

TABLE VI.—AREAS IRRIGATED BY LEASES.

CROP.	AVERAGE OF TRIENNIAL PERIOD ENDING—		PERIOD UNDER REVIEW.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Kharif ... Long-term leases ...	109,499	181,403	195,075	197,074	196,131	196,094
Kharif ... Season leases ...	394	1,961	1,574	569	2,583	1,575
Kharif ... Sale by volume ...	...	...	...	...	...	...
Kharif ... Unauthorised irrigation	318	...	...	...	343	114
Kharif ... Total ...	110,211	183,364	196,649	197,643	199,057	197,783
Rabi ... Long-term leases ...	...	...	...	...	...	...
Rabi ... Season leases ...	4,971	8,468	3,387	5,406	2,330	3,708
Rabi ... Unauthorised irrigation	...	...	...	...	...	...
Rabi ... Total ...	4,971	8,468	3,387	5,406	2,330	3,708
Hot weather ... Season leases ...	...	...	792	491	111	464
Hot weather ... Unauthorised irrigation	...	...	...	...	...	...
Total ... Long-term leases ...	109,499	181,403	195,075	197,074	196,131	196,094
Total ... Season leases ...	5,365	10,429	5,753	6,466	5,024	5,747
Total ... Others	318	...	...	...	343	114
GRAND TOTAL ...	115,182	191,832	200,828	203,540	201,498	201,955

The area under long term lease practically remained stationary during the triennial period. This area was however, considerably more than the averages of the triennial periods ending March 1896 and 1899. In 1901-02, 343 acres of kharif were irrigated in an unauthorized manner, and the amount Rs. 816 assessed for it was realized in full. There was no sale of water by volume for irrigation purposes during the period under review.

TABLE VII.—AREAS IRRIGATED BY DIVISIONS.

DIVISION AND YEAR.	Long-term leases.	SEASON LEASES.			Total.	RAINFALL.		
		Kharif.	Rabi.	Hot weather.		Kharif Season.	Rabi Season.	YEAR.
1	2	3	4	5	6	7	8	9
	Acres.	Acres.	Acres.	Acres.	Acres.	Inches.	Inches.	Inches.
MAHANADI DIVISION ... 1899-1900	54,407	1,278	19	...	55,704	30·86	...	49·19
MAHANADI DIVISION ... 1900-1901	55,358	116	16	...	55,490	57·78	3·69	70·46
MAHANADI DIVISION ... 1901-1902	42,820	255	24	...	43,099	33·34	7·23	47·54
Triennial average	50,867	550	20	...	51,431	40·66	3·64	55·73
BRAHMINI BYTURNI DIVISION ... 1899-1900	74,347	238	18	...	74,604	34·19	0·25	59·61
BRAHMINI BYTURNI DIVISION ... 1900-1901	75,417	...	342	...	75,759	60·11	3·01	72·59
BRAHMINI BYTURNI DIVISION ... 1901-1902	79,100	1,819	72	...	80,991	28·41	8·15	44·79
Triennial average	76,288	686	144	...	77,118	40·90	3·80	59·00
AKHOYAPADA-JAJPUR DIVISION. 1899-1900	66,321	57	3,350	792	70,520	34·97	1·05	59·17
AKHOYAPADA-JAJPUR DIVISION. 1900-1901	66,299	453	5,048	491	72,291	63·77	5·15	82·24
AKHOYAPADA-JAJPUR DIVISION. 1901-1902	74,211	852	2,234	111	77,408	30·77	5·00	46·08
Triennial average	68,944	454	3,544	464	73,406	43·17	3·73	62 50

In a few cases in the Brahmini-Byturni and Akhoyapada-Jajpur Divisions the provisional leases have not yet been converted into long lease. The area shown under lease will probably be slightly affected when these are completed.

TABLE VIII.—LONG-TERM LEASES.

DIVISION.	Leases lapsed on 31st March 1899.	1899-1900.		Leases lapsed on 31st March 1900.	1900-1901.		Leases lapsed on 31st March 1901.	1901-1902.	
		Leases entered into during the year.	Total area under lease in the year.		Leases entered into during the year.	Total area under lease in the year.		Leases entered into during the year.	Total area under lease in the year.
1	2	3	4	5	6	7	8	9	10
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
MAHANADI ...	14,188	17,400	54,407	3,467	3,585	55,532	25,864	13,856	43,524
BRAH. BYTURNI ..	11,057	11,715	74,347	13,954	15,024	75,417	8,828	12.510	79,099
AKHOY-JAJPUR ..	1,904	5,483	66,321	2,417	2,328	66,232	29,478	37,457	74,211
Total ...	27,149	34,598	195,075	19,838	20,937	197,181	64,170	63,823	196,834

In the Mahanadi Division nearly one-half of the lapsed leases has not been renewed. The greater portion of this area is under the new distributaries of the Taldunda and Machgong Canals. The land being low canal water is not required except in a year of drought. There was rain in the critical time in October, and no fresh lease was applied for. In the Brahmini-Byturni and Akhoyapada-Jajpur Divisions much larger areas than those lapsed were secured.

15. TABLE X.—CROP EXPERIMENTS—RICE.

RESULT OF EXPERIMENTS ON "GOOD" RICE CROPS, IRRIGATED WITH CANAL WATER.

DIVISION.	1899-1900			1900-1901.			1901-1902.		
	Number of experiments.	AVERAGE YIELD PER ACRE, WEIGHED DRY.		Number of experiments.	AVERAGE YIELD PER ACRE, WEIGHED DRY.		Number of experiments.	AVERAGE YIELD PER ACRE, WEIGHED DRY.	
		Unhusked grain.	Straw.		Unhusked grain.	Straw.		Unhusked grain.	Straw.
1	2	3	4	5	6	7	8	9	10
	No.	Mds. Srs.	Mds.	No.	Mds. Srs.	Mds.	No.	Mds. Srs.	Mds.
		Nil.			Nil.			Nil.	
Average Orissa Circle ...		Nil.			Nil.			Nli.	

RESULT OF EXPERIMENTS ON "AVERAGE" RICE CROPS, IRRIGATED WITH CANAL-WATER.

	No.	Mds.	Srs.	Mds.	No.	Mds.	Srs.	Mds.	No.	Mds.	Srs.	Mds.
Mahanadi Division ...	15	22	11	36	16	22	24	44	15	21	28	41
Brahmini Byturni Division ...	24	28	8	48	22	30	36	52	25	23	32	39
Akhoyapada-Jajpur Division...	25	22	12	39	22	23	12	44	25	23	12	46
Average Orissa Circle ...	64	24	10	41	60	25	36	47	65	22	37	42

RESULT OF EXPERIMENTS ON "GOOD" RICE CROPS, IRRIGATED WITHOUT CANAL-WATER.

Nil.

RESULT OF EXPERIMENTS ON "AVERAGE" RICE CROPS, GROWN WITHOUT CANAL-WATER.

	No.	Mds.	Srs.	Mds.	No.	Mds.	Srs.	Mds.	No.	Mds.	Srs.	Mds.
Mahanadi Division ...	18	17	6	36	9	20	28	30	11	16	32	40
Brahmini Byturni Division ...	26	19	5	39	25	23	8	31	25	15	28	30
Akhoyapada-Jajpur Division...	27	18	24	31	26	18	0	30	22	15	8	33
Average Orissa Circle ...	71	18	12	35.	60	20	25	30	58	15	36	34

A "good" crop is one decidedly above the ordinary crop in the village in which the experiment is taken.
An "average" crop is one considered a fair average of the whole crop in the village in which the experiment is taken.

TABLE XI.—CROP EXPERIMENTS—RABI.

The Rabi irrigation is not important in the Orissa Circle, and no experiments were made on that crop.

TABLE XII.—RELATIVE VALUE, IRRIGATED AND UNIRRIGATED CROPS.

DIVISION.	RICE.					
	1899-1900.		1900-1901.		1901-1902.	
	Value of outturn to cultivators per acre from irrigated lands.	Value of outturn to cultivators per acre from lands not irrigated.	Value of outturn to cultivators per acre from irrigated lands.	Value of outturn to cultivators per acre from lands not irrigated.	Value of outturn to cultivators per acre from irrigated lands.	Value of outturn to cultivators per acre from lands not irrigated.
	Grain=17 seers per rupee. Straw=9 maunds per rupee.	Grain=17 seers per rupee. Straw=9 maunds per rupee.	Grain=18 seers per rupee. Straw=9 maunds per rupee.	Grain=18 seers per rupee. Straw=9 maunds per rupee.	Grain=20 seers per rupee. Straw=9 maunds per rupee.	Grain=20 seers per rupee. Straw=9 maunds per rupee.
1	2	3	4	5	6	7
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Mahanadi Division ...	39	32	38	35	32	26
Brahmini Byturni „ ...	50	35	53	36	34	23
Akhoyapada Jajpur „ ...	39	31	41	30	35	24
Average Orissa Circle ...	43	32	43	35	34	24

NOTE.—The prices given here are those of husked rice.

The following supplementary table shows the average outturn from irrigated and unirrigated lands as well as the prices realized by the cultivators during the two preceding triennial periods *vide* Government of India's letter No. 1136 C. W. I., dated 2nd October 1901 :—

TABLE XII. (*a*)—AVERAGE OUTTURN FROM IRRIGATED AND UNIRRIGATED LANDS.

	No. of experiment Irrigated.	IRRIGATED.		No. of experiments unirrigated.	UNIRRIGATED.		IRRIGATED VALUE.		UNIRRIGATED VALUE.	
		Rice.	Straw.		Rice.	Straw.	Rice.	Straw.	Rice.	Straw.
		Md.	Md.		Md.	Md.	Rs.	Rs.	Rs.	Rs.
1893-94 ...	214	11·30	24·56	105	9·06	21·62	25·29	2·73	20·25	2·40
1894-95 ...	Rice. Straw. 397 394	19·59	50·38	Rice. Straw. 100 100	17·68	37·91	32·86	5·60	29·82	4·24
1895-96 ...	124 122	17·00	37·00	60 60	15·00	33·00	26·00	4·00	23·00	4·00
Total	.....	47·89	111·94	.....	41·74	92·53	84·15	12·33	73·07	10·64
½ of Rice	.....	23·94	...	.....	20·87	...	42·07	...	36·53	...
Total	.....	71·83	111·94	.....	62·61	92·53	126·22	12·33	109·60	10·64
Average of Triennial period ...	.....	23·94	37·31	.....	20·87	30·84	42·07	4·11	36·53	3·55
1896-97 ...	82	17·00	38·00	56	14·00	33·00	32·40	4·20	26·60	3·70
1897-98 ...	77	17·00	29·00	60	15·00	28·00	32·00	3·00	27·30	3·00
1898-99 ...	66	14·00	37·00	57	9·00	22·00	28·00	4·00	18·00	2·00
Total	.....	48·00	104·00	.....	38·00	83·00	92·40	11·20	71·90	8·70
½ of Rice	.....	24·00	...	.....	19·00	...	46·20	...	35·95	...
Total	.....	72·00	104·00	.....	57·00	83·00	138·60	11·20	107·85	8·70
Average of Triennial period ...	.....	24·00	35·00	.....	19·00	28·00	46·20	3·73	35·95	2·90

In previous year the weight of rice, *i. e.*, husked grain used to be shown as ⅔ of paddy.
To convert those quantities into paddy add 50 per cent. of the outturn shown as rice.

16. TABLE XIII.—ASSESSMENTS, REMISSIONS, AND COLLECTIONS.

Number of item.	Heads.	Average of triennial period ending—		Period under Review.			Average of triennial period, ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1	Opening balance of the year...	61,769	13,201	...	...	...	...
2	Assessment added during the year.	1,97,000	2,75,076	2,67,976	2,89,305	2,45,234	2,67,505
3	Surplus and excess recoveries	...	...	61	14	19	31
	Total ...	2,58,769	2,88,277	2,68,037	2,89,319	2,45,253	2,67,536
4	Ordinary remissions ...	4,578	8,182	923	1,499	...	807
5	Extraordinary remissions ...	...	...	...		70	23
	Deduction ...	4,578	8,182	923	1,499	70	830
6	Net demand (including arrears).	2,54,191	2,80,095	2,67,114	2,87,820	2,45,183	2,66,706
7	Irrecoverable	1,666	379	31	8	7	16
8	Written off under special sanction.						
9	Actually collected ...	2,09,247	2,77,963	2,67,022	2,87,798	2,39,016	2,64,612
10	Surplus and excess recoveries	...	...	61	14	19	31
11	Total Collections and Adjustments.	2,10,913	2,78,342	2,67,114	2,87,820	2,39,042	2,64,659
12	Outstanding balance (line 6—line 11).	43,278	1,753	...	.....	6,141	2,047
13	Percentage of collection (11) to net demand (6).	82·9	99·4	100	100	97·8	99·2
14	Number of certificates issued	4,949	1,336	352	363	305	340

The apparent falling off in the current demand during the year 1901-02 is attributable to the fact that some provisional leases, the assessment for which amounted to Rs. 14,943 were not completed during the year. It also excludes Rs. 13,142, for which leases were received by the Deputy Collector between the 26th and 31st March, so that receipts could not be written up and issued before the end of the year. Including these two amounts the assessment of the year amounted to Rs. 2,73,319. The total demand brought to account was collected with the exception of Rs. 6,141, for which leases were received by the Deputy Collector towards the close of March. The average collections during the triennial period under review were Rs. 13,351 less than the realization in the preceding period and Rs. 55,365 more than was realized during the period ending March 1896. The decrease in the number of certificates issued is satisfactory. Of the 305 certificates issued during the year 1901-02, 297 were satisfied, one was struck off and 7 were pending at the end of the year. The amount involved was Rs. 3,669 or on an average of Rs. 12 per certificate.

17. TABLE XIV.—CLAIMS AND COMPLAINTS.

YEAR.	DIVISION.	I—CLAIMS FOR ORDINARY REMISSIONS.			II TO V.—OTHER COMPLAINTS.			TOTAL OF THE YEAR.		
		Allowed.	Refused.	Pending.	Admitted.	Refused.	Pending.	Admitted.	Refused.	Pending.
1	2	3	4	5	6	7	8	9	10	11
		No.	No	No.	No.	No.	No.	No.	No.	No.
1899-1900	Mahanadi	80	115	12	28	29	...	108	144	12*
	Brahmini Byturni ...	32	76	3	4	16	2	36	92	5
	Akhoyapada Jajpur ..	112	81	1	10	5	2	122	86	3
	Canal Revenue ...	176	63	...	2	1	...	178	64	...
	Total ...	400	335	16	44	51	4	444	386	20
1900-1901	Mahanadi	60	80	1	13	29	1	73	109	2
	Brahmini Byturni ...	88	100	...	11	22	...	99	122	...
	Akhoyapada Jajpur ...	35	44	...	13	24	8	48	68	8
	Canal Revenue ...	396	145	1	...	4	...	396	149	1
	Total ...	579	369	2	37	79	9	616	448	11
1901-1902	Mahanadi ...	58	83	1	2	7	1	60	90	2
	Brahmini Byturni ...	57	44	1	16	28	9	73	72	10
	Akhoyapada Jajpur ...	31	24	3	11	22	...	42	46	3
	Canal Revenue ...	518	64	1	...	2	2	518	66	3
	Total ...	664	215	6	29	59	12	693	274	18

* One out of these was transferred to the Deputy Collector, Canal Revenue Division, for disposal.

TABLE XV.—CLASSIFICATION OF COMPLAINTS.

Class.	SUBJECT.	1899-1900.			1900-1901.			1901-1902.		
		Granted.	Refused.	Total.	Granted.	Refused.	Total.	Granted.	Refused.	Total.
1	2	3	4	5	6	7	8	9	10	11
		No.	No.	No.	No.	No.	No.	No.	No.	No.
I	Claims for remission in which liability to water-rate is denied.	400	335	735	579	369	948	664	215	879
II	Claims for remission in which liability to water-rate is not denied.	5	2	7	8	15	23	3	18	21
III	Complaints of damage caused by the canals.	18	19	37	13	30	43	15	25	40
IV	Complaints against individuals	3	13	16	2	15	17	2	11	13
V	Other complaints ...	18	17	35	14	19	33	9	5	14
	Total ...	444	386	830	616	448	1,064	693	274	967

There were no appeals to the Collectors of the Districts against the decisions of the Canal Officers during the triennial period under review—10 cases came up before the Superintending Engineer for revision, of which decision in seven cases was upheld and three cases were revised

18. TABLE XVI.—ESTABLISHMENT.

Item.	HEAD OF ESTABLISHMENT.	AVERAGE OF TRIENNIAL PERIOD ENDING—		PERIOD UNDER REVIEW.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902	
1	2	3	4	5	6	7	8
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1	Direction and accounts ...	1,24,479	1,49,881	1,52,546	1,63,141	1,47,721	1,54,469
2	Executive						
3	REVENUE MANAGEMENT—						
	(*i*) *Under Deputy Collectors.*						
	Permanent establishment, including travelling allowance.	43,465	45,785	45,804	46,717	45,142	45,888
	Temporary establishment ...	9,636	8,973	1,834	2,211	3,441	2,495
	Contingencies	3,158	2,833	2,454	2,222	2,069	2,248
	Headmen's fees	1,238	20	...	...	368	123
	Fees to patwaris	...	...	...	...	...	...
	Fees to contractors of long-term leases.	...	...	...	...	...	...
4	Total establishment under Deputy Collectors.	57,497	57,611	50,092	51,150	51,020	50,754
	(*ii*) *Under Engineers.*						
	Permanent and temporary establishments, including travelling allowance.	8,449	9,181	9,151	8,991	8,972	9,038
	Contingencies	...	...	...	...	...	...
	Headmen's fees	...	...	...	...	...	...
	Water-regulation establishment ...	3,023	3,234	3,491	3,459	3,420	3,457
5	Total establishment under Engineers	11,472	12,415	12,642	12,450	12,392	12,495
6	Total revenue management ...	68,969	70,026	62,734	63,600	63,412	63,249
7	Navigation establishment ...	16,919	17,490	17,944	15,603	15,099	16,215
8	Total establishment charges ...	2,10,367	2,37,397	2,33,224	2,42,344	2,26,232	2,33,933
9	Collection of water-rates and other revenue by establishment under revenue management.	2,33,126	3,06,833	2,94,808	3,18,403	2,70,853	2,94,688
10	Percentage of (6) on (9) ...	29·58	22·82	21·28	19·97	23·41	21·46
11	Rate of total establishment (8) per acre irrigated.	1·83	1·24	1·16	1·19	1·12	1·15

The triennial average of the establishment under the Deputy Collector is less than that of the two preceding periods, but some increase took place during the year 1901-1902 in the item "temporary establishment," due to the employment of extra men for the completion of new and the renewal of old leases.

TABLE XIX.—PLANTATIONS.

Division.	1899-1900.				1900-1901.				1901-1902.				1899-1900.				1900-1901.				1901-1902.			
	Trees over 12 feet.	Saplings from 4 to 12 feet.	Seedlings under 4 feet.	Total.	Trees over 12 feet.	Saplings from 4 to 12 feet.	Seedlings under 4 feet.	Total.	Trees over 12 feet.	Saplings from 4 to 12 feet.	Seedlings under 4 feet.	Total.	Receipts.	Expenditure.	Profit.	Loss.	Receipts.	Expenditure.	Profit.	Loss.	Receipts.	Expenditure.	Profit.	Loss.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Mahanadi Division ...	26,696	4,928	3,670	35,294	41,886	378	10,250	58,514	46,029	7,059	10,920	64,008	2,985	345	2,640	...	3,052	285	2,767	...	3,731	287	3,444	...
Brahmini Byturni Division	48,204	11,135	14,237	73,576	49,466	10,859	14,124	74,449	52,210	10,569	14,057	76,836	763	148	615	...	808	111	697	...	1,269	156	1,113	...
Akhoyapada-Jajpur Division ...	23,697	9,401	5,591	38,689	28,035	13,703	11,584	53,322	29,073	14,330	12,724	56,127	457	306	151	...	313	355	...	42	339	429	...	90
Total ...	98,597	25,464	23,498	147,559	119,387	30,940	35,958	186,285	127,312	31,958	37,701	196,971	4,205	799	3,406	...	4,173	751	3,464	42	5,339	872	4,557	90
																			3,422					

There was an increase during the year 1901-02, both in the number of trees and receipts compared with the previous two years.

TABLE XX.—MAXIMUM FLOODS OF THE YEAR.

NAME OF RIVER.	Locality.	1899-1900.		1900-1901.		1901-1902.		Highest recorded flood.	
		Date.	Reading.	Date.	Reading.	Date.	Reading.	Date.	Reading.
1	2	3	4	5	6	7	8	9	10
Mahanadi ...	Naraje ... Above weir ...	31-8-1899	82·10	21-9-1900	88·75	6-9-1901	87·30	29-7-1855	93·11
	Do. ... Below „ ...		82 00		88·75	6-9-1901	87·20	26-7-1892	92·10
	Jobra ... Above „ ...		68·45		73·45	6-9-1901	71·20	25-7-1892	75·95
	Do. ... Below „ ...		66·30		72·50	6-9-1901	70·00	23-7-1896	74·65
Katjuri ...	Bellevue		73·00		80·27	6-9-1901	77·50	25-7-1892	83·30
Berupa ...	Jagatpore ... Above „ ...	23-7-1899	67·80	22-9-1900	69·60	6-9-1901	67·35	25-7-1896	72·00
	Do. ... Below „ ...	1-9-1899	62·70	22-9-1900	69·00	6-9-1901	65·30	25-7-1896	71·60
Brahmini ...	Jenapore ... Above „ ...	15-7-1899	63·10	21-8-1900	66·20	27-8-1901	67·20	26-7-1894	69·60
	Do. ... Below „ ...		62·80	21-8-1900	65·75	27-8-1901	66·80		68·60
Patia ...	Jokodia ... Above „ ...		61·80	24-9-1900	64·80	27-8-1901	66·50		69·10
	Do. ... Below „ ..		61·50	24-9-1900	64·00	27-8-1901	66·40		68·70
Byturni ...	Akhyapada ... Above „ ...		59·20	25-9-1900	66·00	26-8-1901	61·50	17-7-1881	66·60
	Do. ... Below „ ...		51·00		61·40	26-8-1901	55·20		63·79
Burah ...	Do. ... Above „		59·00		66·20	26-8-1901	61·10		67·10
	Do. ... Below „ ...		56·00		61·30	26-8-1901	57·80		65·70
Salindi ..	Randia	15-10-1899	52·40		58 40	25-8-1901	54·20	12-9-1887	59·78

The floods in the rivers during the triennial period under review were moderate to low, except in 1900, when the Byturni river rose to within 0·60 of the recorded flood. In 1901 the Brahmini rose to 2-40 ft. below the highest recorded flood. Very little damage was done to Government works by the floods of the last three years.

23. TABLE XXI.—MAINTENANCE AND REPAIRS.

HEADS.	AVERAGE OF TRIENNIAL PERIOD ENDING—		PERIOD UNDER REVIEW.			Average of triennial period, ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Extensions and improvements ...	13,434	11,743	20,596	14,896	12,057	15,850
REPAIRS.						
Head works	54,987	54,257	42,988	28,442	27,474	32,968
Main and Branch Canals ..	1,09,936	97,140	71,379	79,740	75,725	75,615
Distributaries ...	29,969	29,826	32,537	24,975	29,103	28,871
Drainage and Protective Works	7,904	14,466	6,229	10,727	8,509	8,488
Transport Service ...	13,884	9,363	10,030	175	...	3,402
Total ...	2,30,114	2,16,795	1,83,759	1,58,955	1,52,868	1,65,194

There has been diminished expenditure under all heads, except "Extensions and Improvements," under which several minor distributaries, some permanent outlets, several quarters and office buildings for the revenue subordinates were constructed.

The decrease under the heads "Head Works and Main Canal" is due to less damage done by floods. The expenditure under "Distributaries" practically remained the same as in the two preceding periods, while under "Drainage and Protective Works" there was less expenditure than that incurred during the preceding triennial period. The transport service was abolished during 1900-1901, which accounts for the diminished expenditure under that head.

TABLE XXII.—MAINTENANCE AND REPAIRS—CANALS AND DISTRIBUTARIES.

CANALS, BRANCH CANALS, AND DISTRIBUTARIES.	EXPENDITURE.					COST PER MILE.				
	Average of triennial period ending March 1899.	Period under review.			Average of triennial period ending March 1902.	Average of triennial period ending March 1899.	Period under review.			Average of triennial period ending March 1902.
		1899-1900.	1900-1901.	1901-1902.			1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8	9	10	11
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Taldanda Canal ...	16,082	17,879	16,610	27,998	20,829	310	345	319	538	401
Kendrapara do. ...	26,882	16,776	28,713	16,238	20,576	685	430	736	416	527
Do. Extension do. ...	9,950	(—)26	2,658	4,132	2,255	663	(—)2	177	275	150
Gobri do. ...	7,469	5,260	5,452	3,795	4,836	498	351	362	253	322
Gobri Extension do. ...	2,836	2,377	4,699	2,140	3,072	315	264	522	238	341
High Level do. Range I	11,515	11,406	6,145	6,316	7,956	349	346	186	191	241
Do. do. do. II	1,994	1,395	1,778	1,562	1,578	159	112	142	125	126
Do. do. do. III	3,972	4,061	3,202	3,843	3,702	209	214	166	202	194
Jajpur do. ...	1,612	1,348	1,118	1,672	1,379	255	208	172	257	212
Machgong Branch Canal ...	8,293	5,592	4,903	4,436	4,979	259	175	152	139	155
Pattamoondi do. ...	6,535	5,311	4,462	3,593	4,455	138	113	95	76	95
Taldanda Canal Distributaries ...	2,505	2,654	2,732	2,897	2,761	25	26	26	27	26
Machgong do. do. ...	6,581	8,673	7,953	3,796	6,807	31	41	37	17	32
Kendrapara Canal do. ...	10,024	8,427	5,680	8,455	7,521	27	21	15	23	20
Gobri Canal do. ...	576	792	639	999	810	28	33	26	41	33
Gobri Extension do. ...	395	659	612	690	654	23	39	37	41	39
Pattamoondi Canal do. ...	3,111	3,154	2,558	3,119	2,944	29	29	23	28	27
H. L. Canal, Range I Distributaries	3,224	3,964	2,445	2,956	3,121	24	30	19	23	24
Do. do. III do. ...	1,748	1,380	958	3,483	1,940	35	28	19	70	39
Jajpur Canal Distributaries ...	1,661	2,834	1,598	2,708	2,813	30	32	18	34	28

The first reach of the Taldanda Canal was heavily silted up, specially in the first three miles. Forty-six and-a-quarter lakhs of cubic feet of silt were removed, which accounts for the excess expenditure of the year.

The general average cost of maintenance was considerably less than in the preceding triennial period, a result which is due to the absence of any extraordinary floods in the rivers.

TABLE XXIII.—SILT-CLEARANCE AND DREDGING.

LOCALITY.	AVERAGE OF TRIENNIAL PERIOD ENDING MARCH 1899.		PERIOD UNDER REVIEW.						AVERAGE OF TRIENNIAL PERIOD ENDING MARCH 1902.	
			1899-1900.		1900-1901.		1901-1902.			
	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.
1	2	3	4	5	6	7	8	9	10	11
SILT-CLEARANCE BY HAND.										
	C. ft.	Rs.	C. ft.	Rs.	C. ft.	Rs.	C. ft.	Rs.	C. ft.	Rs.
Taldanda Canal	630,306	2,034	2,228,416	6,693	...	2	4,627,034	13,825	2,285,150	6,840
Machgong ,, ...	14,678	46	167,230	506	...		80,197	410	82,476	305
Kendrapara ,, ...	2,402,026	5,929	279,043	716	4,135,664	15,344	43,280	152	1,485,996	5,404
Do. Extension ,, ...	77,140	160	...	...	...	...	...	...	...	...
Gobri ,, ...	325,587	780	202,801	454	9,571	24	...	.	70,791	159
Do. Extension ,, ...	56,905	159	83,172	219	...	...	...	...	27,724	73
Pattamondi ,, ...	3,683	10	...	..	64,639	162	...	. .	21,546	54
High Level, Canal Range I ...	132,756	577	480,774	1,477	85,759	329	388,002	1,068	318,178	958
Do. Range II ...	75,509	362	55,357	217	34,353	84	26,816	125	38.842	142
Do. Range III ...	973	2	36,479	99	6,377	16	37,108	97	26,605	71
Jajpur Canal ...	4 255	10	24,361	80	9,945	44	25,524	70	19,943	65
Total ..	3,723,818	10,069	3,557,633	10,461	4 346,308	16 005	5,227,961	15,747	4.377.301	14,071
DREDGING.										
Taldanda Canal	344,001	2,736	112,494	712	392,025	4,150	479,575	3,592	328,031	2,818
Machgong ,, ...	...	...	...	...	...	..	...	...	...	...
Kendrapara ,, ...	309.070	1,883	166,820	710	49,504	274	90,645	337	102,323	440
Do. Extension ,, ...	25.429	138	39,296	170	...	...	...	...	13,099	57
Gobri ,, ...	24,961	159	...	...	...	...	...	...	...	...
Do. Extension ,, ...	11,012	97	...	...	...	...	...	...	...	...
Pattamoondi ,, ...	...	...	...	...	...	...	...	...	...	...
High Level Canal, Range I ...	87,175	407	11,360	45	111,413	377	13,425	47	45,399	156
Do. Range II ...	5,584	27	...	...	...	...	...	..	...	...
Do. Range III ..	...	...	...	...	...	...	...	...	..	..
Jajpur Canal	...	...	...	...	...	...	...	..	...	...
Repairs to dredging plant										
Total ..	8,07,232	5,447	329,970	1,637	552,942	4,801	583,645	3,976	488,852	3,471

Mr. Barlow reports as follows on flushing and scouring Lock entrances of the Kendrapara Canal, &c., during the years 1899-1900, 1900-1901 and 1901-1902 :—

"The lock entrances at Jumbu and Alba silt up yearly towards the end of the rains, and except at high tide there is not enough water to pass steamers and boats. The silt deposited is cleared partly by hand at low tides and partly by tying up a deeply laden iron boat across the Channels and scouring under it by opening the lock valves, &c. This can only be done when there is a good head, *viz.*, when the water in the river is low.

"To avoid silting in the first reach as far as practicable full supply is run down continuously during the rains, and any excess water not required for irrigation purposes, is run off through the escapes. This has been found to be most successful since the channel has been remodelled and only excavated to the minimum section required. After the floods are over and even after the irrigation is over, full supply is kept running whenever a bar of silt deposits near the head, and it has been found that this deposit is always moved down and generally more or lees dispersed.

"As regards Alba—In 1899 scouring was done by boat—

During October	...	... 7 days.
„ November	...	... 7 „
„ December	...	... 4 „

"In 1900 scouring was done by boat—

During October	...	... 9 days.
„ November	...	... 10 „
„ December	...	... 3 „
„ January	...	... 10 „ } This was necessitated owing to
„ February	...	... 12 „ } slight flood and fresh silt deposit.

"In 1901 scouring was done by boat—

During October	...	... 4 days.
„ November	...	... 6 „
„ December	...	... 9 „
„ January	...	... 2 „

"The result was slow but fairly sure, and each period of working improved the channel though sometimes silt would again deposit. As regards the Pattamoondi Canal, scouring is not required at present as the channel is still in excess of requirements."

For the High Level Canal the first portion of the channel has been contracted in width by throwing excavated silt on the sides of the channel and turfing the same. The Executive Engineer remarks : "The contraction of the channel has been effective in reducing the sand deposit in the entrance channel, but at the same time it has been the cause of heading up the water so much so that hardly 4 inches of head could be obtained in this irrigation season. Hence supply of more than 500c. ft., which is the requirement for irrigation, can hardly be got into the Canal for the purpose of escape in scouring the silt. The contracted state of the channel at the entrance has reduced silt deposit and will further reduce. Any silt brought in will be taken down the Cannal where the section is wide enough."

The following extracts are from a note by Mr. Arnott, Executive Engineer, on the Taldanda Canal. "In the irrigation season of 1900 there was great difficulty in getting sufficient water down the first reach of the canal owing to the silted up state of the first three miles. It was settled to lower the bed of the canal by 3 inches from Jobra to Biribati, and to reduce the width of the channel below the head sluice by depositing the excavated sand from the bed on to the sides until it was above full supply line. The canal was kept running full for the whole season and whether owing to the low state of the river or to the flush which a full supply gives, tending to send the silt down to the lower reaches, the first 3 miles of the Taldanda canal after the irrigation season of 1901 were remakably free from silt. Mr. Arnott is of opinion that this was due to the flushing maintained during the season, and he considers that if his suggestions to cut down the weirs were adopted, a still further 'draw' to the water would be given."

The average expenditure incurred during the triennial period under review in clearing silt from the Taldanda Canal is more than three times as large as in the preceding period, the reasons for which are explained above.

During 1900-1901, 41⅛ lakhs of silt were removed from the 1st reach of the Kendrapara Canal, which was choked with it. The sill of the first weir was lowered, so that full discharge can be passed through the reach with less than full depth of water in the canal.

Very little silt is cleared from the other canals, and no special remarks are called for in respect to them. The general average expenditure for the period under review was Rs. 4,000 in excess of the previous one.

Under the head 'dredging' the expenditure on the Taldanda Canal was practically the same as in the previous three years, while there was a satisfactory decrease under all other canals.

MIDNAPORE CANAL.

25. TABLE I—CAPITAL ACCOUNT.

HEAD OF ACCOUNT.	Outlay to end of March 1899.	OUTLAY DURING—			Outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
DIRECT CHARGES.	Rs.	Rs.	Rs.	Rs.	Rs.
Works	53,69,721	8,000	.....	1,223	53,78,944
Establishment	19,28,956	.....	.....	280	19,29,236
Tools and plant	9,18,847	.....	.....	19	9,18,866
Suspense	.....	.....	.....	.....	.....
Loss by exchange	94,800	.....	.....	.....	94,800
Total ...	83,12,324	8,000	.....	1,522	83,21,846
Less—Receipts on capital account...	31,558	.....	.....	.....	31,558
Total direct charges ...	82,80,766	8,000	.....	1,522	82,90,288
Indirect charges	1,84,661	.....	.....	39	1,84,700
Total outlay, direct and indirect ...	84,65,427	8,000	.....	1,561	84,74,988

The construction estimate of this canal was closed on 31st March 1899. The sum of Rs. 8,000 spent in 1899-1900 represents half cost of the purchase of the Executive Engineer's office and residence at Midnapore. The expenditure incurred during the year 1901-1902 was on account of constructing permanent outlets to improve the water distribution.

26. TABLE II—LENGTHS OF CHANNELS.

DESCRIPTION OF CHANNEL.	LENGTH OF CHANNEL IN MILES.				
	At end of March 1899.	Increase or decrease during—			At end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Navigable canals (both for irrigation and navigation) ... Miles	72	.....	.....	.....	72
Branch canals (for irrigation only) „	.....	.....	.....	.....	.....
Distributaries ... „	283·97	.....	.....	.....	283·97
Village channels ... „	29·58	.....	.....	0·37	29·95
Permanent outlets ... No.	43	7	3	24	77
Temporary „ ... „	942	61	51	68	1,122
Drainage channels ... Miles	54·42	.....	.....	.....	54·42
Area protected from flood ... Acres	437,120	.....	.....	.....	437,120
Gross area under command... „	180,000	.....	.....	.....	180,000

There was no change in the lengths of navigable channels and distributaries during the triennial period. There was an increase of 0·37 miles in the length of village channels owing to the construction of Madhpur village channel. The number of permanent, as compared with the number of temporary outlets, is still very small, but it has not been considered desirable or necessary to incur the great expense of making all the outlets permanent, and it was decided to take in hand only the more important ones at the heads of distributaries. The construction of 48 of these outlets at an estimated cost of Rs. 5,682 was begun in 1901-1902, and the work is still in progress. On the whole, the canal may be considered to be fairly well equipped for the distribution of water.

27. TABLE III.—FINANCIAL RESULTS.

Item.	PARTICULARS.	AVERAGE OF TRIENNIAL PERIOD ENDING—		PERIOD UNDER REVIEW.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
	1	2	3	4	5	6	7
	RECEIPTS.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1	Water-rates	1,33,524	1,09,360	1,27,730	1,18,920	1,24,786	1,23,812
2	Navigation	1,31,468	1,30,044	89,789	97,730	89,835	92,451
3	Miscellaneous	22,881	23,651	21,133	17,563	26,371	21,689
	Total	2,87,873	2,63,055	2,38,652	2,34,213	2,40,992	2,37,952
	Less—Refunds of revenue ...	265	2,577	812	840	386	679
4	Total Receipts ...	2,87,608	2,60,478	2,37,840	2,33,373	2,40,606	2,37,273
	WORKING EXPENSES.						
	DIRECT CHARGES.						
	I.—Works.						
5	Extensions and improvements ...	8,339	8,896	9,316	11,156	2,490	7,654
6	Maintenance and repairs ...	1,14,242	1,26,853	1,47,076	69,622	61,293	92,664
7	Establishment (Direction and Accounts and Executive).	32,586	40,297	45,256	37,435	40,831	41,174
8	Tools and plant	43,250	29,452	35,575	10,131	24,250	23,319
	Total ...	1,98,417	2,05,498	2,37,223	1,28,344	1,28,864	1,64,811
	II.—Revenue management.						
9	Irrigation establishment ...	21,203	24,939	25,409	26,260	25,594	25,754
10	Navigation ditto	8,016	8,423	7,934	7,790	6,824	7,516
	Total ...	29,219	33,362	33,343	34,050	32,418	33,270
11	Total Direct Charges ...	2,27,636	2,38,861	2,70,566	1,62,394	1,61,282	198,081
	INDIRECT CHARGES.						
12	Capitalised abatement of land revenue	.....	.....	.....	.....	.....	.....
13	Leave and pension allowances ...	8,653	10,312	11,004	10,008	10,255	10,422
	Total ...	8,653	10,312	11,004	10,008	10,255	10,422
14	Total working expenses (direct and indirect).	2,36,289	2,49,173	2,81,570	1,72,402	1,71,537	2,08,503
15	Net revenue	51,319	11,305	(—)43,730	60,971	69,069	28,770
16	Capital outlay (direct and indirect) ...	84,48,324	84,63,702	84,73,427	84,73,427	84,74,988	84,73,947
17	Percentage of net revenue on capital outlay.	0·61	0·13	(—)0·52	0·72	0·81	0·34
18	Area irrigated Acres ...	73,710	71,322	72,105	80,330	82,134	78,190
19	Average water-rate (item 1) per acre irrigated.	1·81	1·53	1·77	1·48	1·52	1·59
20	Total irrigation establishment charges (items 7+9) per acre irrigated.	0·73	0·91	0·98	0·79	0·81	0·86
21	Working expenses (direct and indirect) per acre irrigated.	3·20	3·49	3·90	2·15	2·09	2·66

The reduction in the average receipts for the triennial period under review compared with those for the two previous periods is mainly due to the opening of the Bengal-Nagpur Railway which has tapped the canal traffic and caused the withdrawal of the Steamer Service by the Calcutta Steam Navigation Company. There was however a considerable falling off in the working expenses. The reduction has been mainly effected under the head Maintenance and Repairs, as owing to the cessation of the Steamer Services no extensive silt clearance and revetting of canal banks, &c., were required. In consequence of the great reduction effected in the working expenses the net revenue increased from (—) Rs. 43,730 in 1899-1900 and Rs. 60,971 in 1900-1901 to Rs. 69,069 in 1901-1902 notwithstanding the great decrease in navigation receipts. The result is highly satisfactory.

TABLE III(*a*)—INTEREST.

28. The interest charges for and up to the end of the triennial period are given below :—

	To end of March 1899.	Period under review.			To end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Interest charges	Rs. 87,24,289	Rs. 3,31,390	Rs. 3,31,551	Rs. 3,31,580	Rs. 97,18,810

29. TABLE IV.—RAINFALL.

	Averages of 4 Stations.				Average of three years ending March 1902.
	Average of fourteen years ending March 1899.	Period under review.			
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
	Inches.	Inches.	Inches.	Inches.	Inches.
Kharif season — July ...	11·11	20·39	8·87	8·99	12·75
Kharif season — August ...	12·22	9·01	14·75	13·38	12·38
Kharif season — September ...	8·25	9·55	20·95	11·18	13·89
Kharif season — October ..	3·27	3 33	1·35	1·29	1·99
Total ...	34·85	42·28	45·92	34·84	41·01
Rabi season — November ...	0·59	0·00	0·00	4·09	1·36
Rabi season — December ..	0·07	0·00	0 90	0·00	0·30
Rabi season — January ...	0·37	0·02	2·93	0·00	0·98
Rabi season — February ..	0·95	0·43	3·14	0·00	1·19
Total ...	1·98	0 45	6·97	4·09	3·83
Whole year ...	54·29	69·98	65·85	54·49	63·44

During each of the past three years the rainfall in the *Kharif* season was well up to or above the normal. In October 1900-1901 and 1901-1902 there was a marked deficiency which created a strong demand for Canal water.

30. TABLE V.—AREAS IRRIGATED.

YEAR.	Kharif.	Rabi.	Perennial.	Total.	Rainfall.		
					Kharif season.	Rabi season.	Year.
1	2	3	4	5	6	7	8
	Acres.	Acres.	Acres.	Acres.	Inches.	Inches.	Inches.
1893-94 ...	79,550	6,213	...	85,763	37·09	0·31	70·63
1894-95 ...	69,941	175	...	70,116	36·27	2·74	55 89
1895-96 ...	65,251	....	...	65,251	24·48	0·03	36·66
Triennial average ...	71,581	2,129	...	73,710	32·61	1·03	54·39
1896-97 ...	65,183	...	...	65,183	30·33	0·90	55·08
1897-98 ...	72,206	...	...	72,206	29·09	0·34	48·52
1898-99 ...	70,741	5,837	...	76,578	34·85	0·20	51·48
Triennial average ...	69,377	1,945	...	71,322	31·42	0·48	51·69
1899-1900 ...	71,398	707	...	72,105	42·28	0·45	69·98
1900-1901 ...	79,429	901	...	80,330	45·92	6·97	65·85
1901-1902 ...	81,868	266	...	82,134	34·84	4·09	54·49
Triennial average ...	77,565	625	...	78,190	41·01	3·83	63·44

The increase in the area irrigated during the *Kharif* season of 1901-02 was due to the excessive demand for canal water caused by the scanty rainfall in October.

40. TABLE VI.—AREAS IRRIGATED BY LEASES.

CROP.	AVERAGE OF TRIENNIAL PERIOD ENDING—		PERIOD UNDER REVIEW.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Kharif ... Long-term leases ...	71,354	68,965	71,398	78,809	81,784	77,330
Kharif ... Season leases ...	214	11	.....	620	.....	207
Kharif ... Sale by volume ...	.....	.....	.....	.....	.....	.....
Kharif ... Unauthorized irrigation	13	401	.....	.....	84	28
Kharif ... Total ...	71,581	69,377	71,398	79,429	81,868	77,565
Rabi ... Long-term leases ...	.....	.....	.....	.....	.....	.....
Rabi ... Season leases ...	2,129	1,945	707	901	266	625
Rabi ... Unauthorized irrigation	.....	.....	.....	.....	.....	.....
Rabi ... Total ...	2,129	1,945	707	901	266	625
Hot weather ... Season leases ...	.....	.....	.....	.....	.....	.....
Hot weather ... Unauthorized irrigation	.....	.....	.....	.....	.....	.....
Total ... Long-term leases ...	71,354	68,965	71,398	78,809	81,784	77,330
Total ... Season leases ...	2,343	1,956	707	1,521	266	832
Total ... Others	13	401	.....	.....	84	28
GRAND TOTAL ...	73,710	71,322	72,105	80,330	82,134	78,190

Nearly the whole of the irrigation during the year 1901-02 was carried out under the system of long-term leases. The area irrigated exceeded the limit which was formerly laid down as the maximum for which long leases should be granted. The area under season leases was very small.

TABLE VIII.—LONG-TERM LEASES.

DIVISION.	Leases lapsed on 31st March 1899.	1899-1900.		Leases lapsed on 31st March 1900.	1900-1901.		Leases lapsed on 31st March 1901.	1901-1902.	
		Leases entered into during the year.	Total area under lease in the year.		Leases entered into during the year.	Total area under lease in the year.		Leases entered into during the year.	Total area under lease in the year.
1	2	3	4	5	6	7	8	9	10
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Cossye Dn. ...	3,121	2,570	71,856	14,040	22,653	80,469	22,169	23,605	81,905
Total ...	3,121	2,570	71,856	14,040	22,653	80,469	22,169	23,605	81,905

The areas of new leases entered into during the year 1900-1901 and 1901-1902 exceeded those of the lapsed leases, and this circumstance may be accepted as evidence of the popularity of canal water.

TABLE IX.—DUTY OF WATER.

YEAR AND CROP.		CANAL SYSTEM UNDER MIDNAPORE WEIR.						CANAL SYSTEM UNDER PANCHKURA WEIR.						CANAL SYSTEM UNDER TIDAL REACHES, RANGES I & II.					
		Area irrigated.	Number of days the canal was open.	AVERAGE SUPPLY.		DUTY.		Area irrigated.	Number of days the canal was open.	AVERAGE SUPPLY.		DUTY.		Area irrigated.	Number of days the canal was open.	AVERAGE SUPPLY.		DUTY.	
				At head.	Utilised.	At head.	Utilised.			At head.	Utilised.	At head.	Utilised.			At head.	Utilised.	At head.	Utilised.
1		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
		Acres.	No.	C. ft. p. sec.	C. ft. p. sec.	Acres.	Acres.	Acres.	No.	C. ft. p. sec.	C. ft. p. sec.	Acres.	Acres.	Acres.	No.	C. ft. p. sec.	C. ft. p. sec.	Acres.	Acres.
1899-1900	Kharif	63,117	123	247·49	238·57	255·03	264·56	6,484	123	12·30	11·81	527·15	549·02	1,797	123	...	...	...	...
	Rabi	...	...	...	...	...	...	707	120	10·05	6·43	70·34	109·95	...	...	...	...	...	...
1900-1901	Kharif	70,430	123	384·71	351·03	183·06	200·63	7,921	123	61·62	47·53	128·54	166·65	1,078	123	...	...	...	...
	Rabi	...	...	...	...	...	...	901	...	28·78	13·84	31·30	65·10	...	...	...	...	...	...
1901-1902	Kharif	71,699	123	375·24	303·98	191·11	235·86	8,732	123	53·25	37·72	163·98	231·49	1,437	123	...	...	...	...
	Rabi	...	...	...	...	...	...	266	...	5·01	2·66	53·09	100·00	...	...	...	...	...	...
Triennial average for the period ending 1901-02	Kharif	68,416	...	335·81	297·86	209·73	233·68	7,712	...	42·39	32·35	273·22	315·72	1,437	...	...	...	...	...
	Rabi	...	...	...	...	...	...	625	...	14·61	7·64	51·58	91·68	...	...	...	...	...	...
Triennial average for the period ending 1898-99	Kharif	61,095	...	252·04	199·04	280·07	349·38	7,210	...	36·15	33·64	216·10	252·28	1,072	...	...	...	...	...
	Rabi	...	...	...	...	...	...	1,945	...	...	...	31·46	63·65	...	...	...	...	...	...
Triennial average for the period ending 1895-96	Kharif	64,450	...	432·58	321·66	128·54	183·73	6,219	...	59·25	39·33	108·82	221·68	912	...	...	...	...	...
	Rabi	...	...	...	...	0·83	1·74	2,129	...	34 58	6·42	27·71	148·00	...	...	...	...	...	...

The Superintending Engineer writes : "The duty of water on a canal which for the most part merely supplements the rainfall cannot be very accurately gauged, and the figures given have not much value. Mr. White, in replying to questions put by the Irrigation Commission, gives some interesting information regarding the duty during months of greatest pressure. The instances which he records give duties varying from 120 to 220 acres, and he considers that a duty of 160 acres represents the average during times of pressure."

32. TABLE X.—CROP EXPERIMENTS—RICE.

Conducted by the Executive Engineer and his subordinates.

RESULT OF EXPERIMENTS ON "GOOD" RICE CROPS, IRRIGATED WITH CANAL-WATER.

Division.	1899-1900.			1900-1901.			1901-1902.		
	Number of experiments.	Average yield per acre, weighed dry.		Number of experiments.	Average yield per acre, weighed dry.		Number of experiments.	Average yield per acre, weighed dry.	
		Unhusked grain.	Straw.		Unhusked grain.	Straw.		Unhusked grain.	Straw.
1	2	3	4	5	6	7	8	9	10
	No.	Mds. Srs.	Mds.	No.	Mds. Srs.	Mds.	No.	Mds. Srs.	Mds.
Cossye Division ...	4	27 29¼	52	18	23 26	38	6	24 39¼	40⅜

RESULT OF EXPERIMENTS ON "AVERAGE" RICE CROPS IRRIGATED WITH CANAL WATER.

	No.	Mds. Srs.	Mds.	No.	Mds. Srs.	Mds.	No.	Mds. Srs.	Mds.
Cossye Division ...	22	19 2	38	21	21 5	38	34	22 31	41

RESULT OF EXPERIMENTS ON "GOOD" RICE CROPS IRRIGATED WITHOUT CANAL-WATER.

	No.	Mds. Srs.	Mds.	No.	Mds. Srs.	Mds.	No.	Mds. Srs.	Mds
Cossye Division ...	3	27 19	65	10	19 31	30	6	21 25½	35

RESULT OF EXPERIMENTS ON "AVERAGE" RICE CROPS, IRRIGATED WITHOUT CANAL WATER.

	No.	Mds. Srs.	Mds.	No.	Mds. Srs.	Mds.	No.	Mds. Srs.	Mds.
Cossye Division ...	9	17 24	36	21	14 14	28	24	17 11½	30⅝

Conducted by the Deputy-Collector, Canal Revenue Division and his subordinates.

RESULT OF EXPERIMENTS OF "GOOD" RICE CROPS IRRIGATED WITH CANAL WATER.

Division.	1899-1900.			1900-1901.			1901-1902.		
	Number of experiments.	Average yield per acre, weighed dry.		Number of experiments.	Average yield per acre, weighed dry.		Number of experiments.	Average yield per acre, weighed dry.	
		Grain.	Straw.		Grain.	Straw.		Grain.	Straw.
1	2	3	4	5	6	7	8	9	10
	No.	Mds. Srs.	Mds.	No.	Mds. Srs.	Mds.	No.	Mds. Srs.	Mds.
Cossye Division ...	4	21 15	36	1	25 10	52	4	27 20	47

RESULT OF EXPERIMENTS ON "AVERAGE" RICE CROPS IRRIGATED WITH CANAL WATER.

	No.	Mds. Srs.	Mds.	No.	Mds. Srs.	Mds.	No.	Mds. Srs.	Mds.
Cossye Division ...	...	...	...	11	21 30	35	12	21 32	38

A "good" crop is one decidedly above the ordinary crop in the village in which the experiment is taken.

An "average" crop, is one considered a fair average of the whole crop in the village in which the experiment is taken.

RESULT OF EXPERIMENTS ON "GOOD" RICE CROPS IRRIGATED WITHOUT CANAL WATER.

	No.	Mds.	Srs.	Mds.	No.	Mds.	Srs.	Mds.	No.	Mds.	Srs.	Mds.
Cossye Division ...	4	22	0	37	...	...		...	4	19	4	36

RESULT OF EXPERIMENTS ON "AVERAGE" RICE CROPS, IRRIGATED WITHOUT CANAL WATER.

	No.	Mds.	Srs.	Mds.	No.	Mds.	Srs.	Mds.	No.	Mds.	Srs.	Mds.
Cossye Division ...	..	...		...	12	13	8	18	12	15	39	29

TABLE XII.—RELATIVE VALUE, IRRIGATED AND UNIRRIGATED CROPS.

DIVISION.	RICE.					
	1899-1900.		1900-1901.		1901-1902.	
	Value of outturn to cultivators per acre from irrigated lands.	Value of outturn to cultivators per acre from lands not irrigated.	Value of outturn to cultivators per acre from irrigated lands.	Value of outturn to cultivators per acre from lands not irrigated.	Value of outturn to cultivators per acre from irrigated lands.	Value of outturn to cultivators per acre from lands not irrigated.
	Paddy—24 srs per rupee Straw—6mds, per rupee.	Paddy—24 srs. per rupee. Straw—6mds. per rupee.	Paddy—21 srs. per rupee Straw—5 mds per rupee.	Paddy—21 srs. per rupee. Straw—5 mds, per rupee.	Paddy—17 srs. per rupee. Straw—$4\frac{4}{7}$ mds. per rupee.	Paddy—17 srs. per rupee. Straw—$4\frac{4}{7}$ mds. per rupee.
1	2	3	4	5	6	7
COSSYE DIVISION.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
MIDNAPORE CANAL—						
Average Paddy ...	31 12 0	29 6 0	38 9 0	26 4 0	51 5 0	40 8 0
Ditto Straw ...	6 5 0	6 0 0	7 3 0	5 10 0	9 0 0	6 13 0
Total ...	38 1 0	35 6 0	45 12 0	31 14 0	60 5 0	47 5 0

N.B.—$\frac{1}{3}$rd deducted from the weight of paddy to arrive at the quantity of rice. The Executive Engineer, however, found $\frac{2}{3}$th husk from actual experiment in the year 1900-1901.

The average value of the outturn for the triennial period under review and the two previous triennial are :—

	Irrigated. Rs. A.	Unirrigated. Rs. A.
Period ending March 1902	41 2	No observation.
Ditto ditto 1899	42 7	36 4
Ditto ditto 1896	44 7	38 2

The high value of the outturn in 1901-1902, as compared with that in the two previous years, was due to the high price of rice in 1901-1902.

33. TABLE XIII.—ASSESSMENTS, REMISSIONS, AND COLLECTIONS.

Number of item.	Heads.	Average of triennial period ending—		Period under Review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1	Opening balance of the year ..	20,048	8,360	5,718	1,128	163	2,336
2	Assessment sent to Deputy Collector during the year	1,23,079	1,10,360	1,23,598	1,18,891	1,25,108	1,22,532
3	Surplus and excess recoveries ...	.....	.....	.....	.....	.....	.....
	Total ...	1,43,127	1,18,720	1,29,316	1,20,019	1,25,271	1,24,868
4	Ordinary remissions	2,368	2,349	258	436	180	291
5	Extraordinary remissions ...	.....	.....	.....	.....	.....	.....
	Deduction ..	2,368	2,349	258	436	180	291
6	Net demand (including arrears) ...	1,40,759	1,16,372	1,29,058	1,19,582	1,25,091	1,24,577
7	Irrecoverable	.....	.....	200	500	64	255
8	Written off under special sanction ...	2	120	.....	.....	.....	.....
9	Actually collected	1,33,524	1,09,360	1,27,730	1,18,920	1,24,786	1,23,812
10	Surplus and excess recoveries ...	.....	.....	.....	.....	.....	.....
11	Total Collections and Adjustments	1,33,526	1,09,480	1,27,930	1,19,420	1,24,850	1,24,067
12	Outstanding balance (line 6—line 11)	7,233	6,891	1,128	163	241	510.
13	Percentage of collection (11) to net demand (6)	94·9	94·07	99·1	99·8	99·8	99·6
14	Number of certificates issued ..	888	446	284	186	169	213

The Superintending Engineer writes :—

"*Item 1.*—The opening balance for the triennial period ending March 1902, was less than that of the first and second. This was due to the Deputy Collector being vested with the powers of Certificate Collector. The rate-payers have learnt by experience that the non-payment of their dues within the prescribed time is followed by the prompt filing of certificates against them, and the issue of processes for distraint, and that this puts them to trouble and expense.

Item 2.— The increase was due to a larger area irrigated during the triennial period ending 31st March 1902.

Item 4.—The average remission granted during the triennial period ending March 1902 was less than that of the first and second. This was due to correct assessment having been made after test and re-test of the maps of the villages under lease.

Item 14.—The investment of certificate power to the Deputy Collector in charge of the Canal Revenue Division, Midnapore, has been followed by a gradual reduction in the number of certificates.

46. The following Supplementary Table XIII (*a*) shows the remissions of original demand made as the result of admitted complaints.

TABLE XIII (*a*).

Year.	Amount written off as irrecoverable.	Remissions of original demand made as the result of admitted complaints.		Remarks.
		Portion remitted so as to reduce the amount due.	Refund upon such portion as has been paid.	
	Rs.	Rs.	Rs.	
1899-1900 ...	200	258	833	
1900-1901 ...	500	436	830	
1901-1902 ..	64	180	380	

34. TABLE XIV.—CLAIMS AND COMPLAINTS.

Year.	Division.	I.—Claims for ordinary remissions.			II to V.—Other complaints.			Total of the year.		
		Allowed.	Refused.	Pending.	Admitted.	Refused.	Pending.	Admitted.	Refused.	Pending.
1	2	3	4	5	6	7	8	9	10	11
	Cossye Div.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1899-1900 ...	Executive Engineer	...	...	...	...	...	...	...	...	...
	Special Dy. Collr. ...	145	132	47	157	106	42	302	238	89
	Total ...	145	132	47	157	106	42	302	238	89
1900-1901 ...	Executive Engineer	4	10	...	4	3	3	8	13	3
	Special Dy. Collr. ...	52	51	37	277	75	56	329	126	93
	Total ...	56	61	37	281	78	59	337	139	96
1901-1902 ...	Executive Engineer	2	7	...	6	3	1	8	10	1
	Special Dy. Collr. ...	61	55	33	209	130	23	270	185	56
	Total ...	63	62	33	215	133	24	278	195	57

TABLE XV.—CLASSIFICATION OF COMPLAINTS.

Class.	Subject.	1899-1900.			1900-1901.			1901-1902.		
		Granted.	Refused.	Total.	Granted.	Refused.	Total.	Granted.	Refused.	Total.
1	2	3	4	5	6	7	8	9	10	11
		No.	No.	No.	No.	No.	No.	No.	No.	No.
I	Claims for remission in which liability to water-rate is denied	145	132	277	56	61	117	63	62	125
II	Claims for remission in which liability to water-rate is not denied ...	76	76	152	46	23	69	28	13	41
III	Complaints of damage caused by the canals	6	7	13	14	3	17	15	3	18
IV	Complaints against individuals ...	...	3	3	...	3	3	...	2	2
V	Other complaints	75	20	95	221	49	270	172	115	287
	Total ...	302	238	540	337	139	476	278	195	473

35. TABLE XVI.—ESTABLISHMENT.

Item.	Head of Establishment.	Average of triennial period ending—		Period under review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1	Direction and accounts ...	32,586	40,297	45,236	37,435	40,831	41,174
2	Executive						
3	Revenue management—						
	(i) Under Deputy Collectors.						
	Permanent establishment including travelling allowance.	17,529	19,701	20,435	21,161	21,193	20,930
	Temporary establishment ...	656	2,428	1,869	1,969	1,390	1,742
	Contingencies	1,121	1,368	1,217	1,213	1,155	1,195
	Headmen's fees	598	...	...	...	...	...
	Fees to patwaries	...	...	...	...	...	...
	Fees to contractors of long-term leases.	...	...	...	...	...	...
4	Total establishment under Deputy Collectors.	19,904	23,497	23,521	24,343	23,738	23,867
	(ii) Under Engineers.						
	Permanent and temporary establishments, including travelling allowance.	1,299	1,442	1,888	1,917	1,856	1,887
	Contingencies	...	...	...	...	...	...
	Headmen's fees	...	...	...	...	...	...
	Water-regulation establishment ...	...	...	...	...	...	...
5	Total establishment under Engineers	1,299	1,442	1,888	1,917	1,856	1,887
6	Total revenue management ...	21,203	24,939	25,409	26,260	25,594	25,754
7	Navigation establishment ...	8,016	8,423	7,934	7,790	6,824	7,516
8	Total establishment charges ...	61,805	73,659	78,599	71,485	73,249	74,444
9	Collection of water-rates and other revenue by establishment under revenue management.	1,44,471	1,21,408	1,40,453	1,31,928	1,38,927	1,37,103
10	Percentage of (6) on (9) ...	14·67	20·54	18·09	18·46	18·42	18·78
11	Rates of total establishment (8) per acre irrigated.	0·84	1·03	1·09	0·89	0·89	0·95

The Superintending Engineer states :—

"The increase in the cost of establishment under Engineers during the triennial period under review (which includes patrols only) is due to an increase in their number from 16 to 24. Their wages have also had to be raised from Rs. 6 to Rs. 7 and Rs 8. The additional outlay has resulted in greater efficiency.

36. TABLE XVII.—NAVIGATION.

		Average of triennial period ending—		Period under Review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1		2	3	4	5	6	7
Number of miles open ...	No.	72	72	72	72	72	72
Toll collections ..	Rs.	1,31,468	1,30,043	89,789	97,730	89,835	92,451
Rate of toll per mile ...	„	1,826	1,806	1,247	1,357	1,248	1,284
Tollage on boats per ton per mile	Pies	3·17	3·19	3·08	2·94	3·13	3·05
Number of boats plying cargo and passengers, including empties ...	No.	39,973	41,896	31,035	31,301	27,063	29,800
Tonnage of cargo and passenger boats, including empties	Tons	413,993	446,272	336,857	382,536	360,886	360,093
Estimated value of cargo, including rafts ...	Rs.	1,25,38,297	1,31,15,643	89,29,710	1,05,94,959	87,20,171	94,14,947

The falling off in navigation receipts during the triennial period under review is mainly due to the opening of the Bengal-Nagpur Railway which has monopolized the transport of timber. The passenger traffic has also considerably decreased.

37. TABLE XVIII.—MISCELLANEOUS REVENUE.

Particulars.		Average of trennial period ending —		Period under Review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1		2	3	4	5	6	7
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Sales of water		1	45	250	250	250	250
Water-supply of towns ...		...	...	...	...	...	...
Plantations		39	56	3	28	22	18
Other canal produce ...		30	15	99	47	99	82
Water-power		...	...	...	...	...	...
Rents of buildings		858	1,060	1,021	824	639	828
Fines		...	2	...	...	88	29
Miscellaneous...	Rents of lands	11,636	18,034	18,134	13,158	13,624	14,972
	Fisheries ...	1,476	1,465	1,138	1,189	2,365	1,564
	Cost of process	1,076	588	381	262	245	296
	Sale of old materials.	336	...	...	...	...	...
	Other items ...	7,429	2,386	107	1,805	9,039	3,650
	Total ...	22,881	23,651	21,133	17,563	26,371	21,689

The revenue during the year 1901-1902 was much greater than that for the two preceding years. This was due to the increase in the sale proceeds of the Koyalighats which rose from Rs. 583 in 1900-1901 to Rs. 4,698 in 1901-1902.

Division.	1899-1900.				1900-1901.				1901-1902.				1899-1900.				1900-1901.				1901-1902.			
	Trees over 12 feet.	Saplings from 4 to 12 feet.	Seedlings under 4 feet.	Total.	Trees over 12 feet.	Saplings from 4 to 12 feet.	Seedlings under 4 feet.	Total.	Trees over 12 feet.	Saplings from 4 to 12 feet.	Seedlings under 4 feet.	Total.	Receipts.	Expenditure.	Profit.	Loss.	Receipts.	Expenditure.	Profit.	Loss.	Receipts.	Expenditure.	Profit.	Loss.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs	Rs.	Rs.	Rs.	Rs.
Cossye ...	18,002	4,997	5,283	28,282	18,654	5,903	5,448	30,005	19,224	7,103	5,821	32,148	3	228	...	225	28	275	...	247	22	188	...	166
Total ...	18,002	4,997	5,283	28,282	18,654	5,903	5,448	30,005	19,224	7,103	5,821	32,148	3	228	...	225	28	275	...	247	22	188	...	166

During the triennial period under review there was a gradual increase in the number of plantations. The receipts were nominal compared with the cost of maintaining them.

TABLE XX.—MAXIMUM FLOODS OF THE YEAR.

NAME OF RIVER.	Locality.	1899-1900.		1900-1901.		1901-1902.		Highest recorded flood.	
		Date.	Reading.	Date.	Reading.	Date.	Reading.	Date.	Reading.
1	2	3	4	5	6	7	8	9	10
Cossye ...	Midnapore ... Above weir	24-9-99	87·80	24-9-00	90·30	5-9-01	89·00	19-6-98	93·30
	Midnapore ... Below	24-9-99	86·75	...	89·20	5-9-01	88·10	19-6-98	92·20
	Panchkura .. Above weir	25-9-99	33·70	23-9-00	32·70	6-9-01	33·30	10-10-76	35·00
	Panchkura .. Below	25-9-99	33·70	23-9-00	32·50	6-9-01	33·30	10-10-76	35·00
Rupnarain ...	Dainan	24-7-99	16·00	25-9-00	16·30	26-11-01	16·90	15-10-74	20·00
	Kantapuker	24-7-99	16·08	29-9-00	16·60	26-11-01	17·00	26-8-85	16·80
Damodar ...	Bansberia	24-7-99	15·42	24-9-00	16·42	26-11-01	14·90	26-8-85	16·70
Hooghly ...	Uluberia	24-7-99	15·00	24-9-00	15·2	26-11-01	15·70	1-9-94 / 31-8-90	15·50
Selye	Ghattal	19-7-99	26·50	25-9-00	33·00	6-9-01	29·75	25-6-93	32·75
Darkeswar ...	Sheikpore	13-7-99	39·29	22-9-00	44·27	5-9-01	43·27	2-8-87	46·02

The floods during the triennial period were of ordinary character and little or no damage was done to the head works.

40. TABLE XXI.—MAINTENANCE AND REPAIRS.

HEADS.	AVERAGE OF TRIENNIAL PERIOD ENDING—		PERIOD UNDER REVIEW.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Extensions and improvements ...	8,339	8,896	9,316	11,156	2,490	7,654
REPAIRS.						
Head works	17,222	14,477	15,513	12,543	11,306	13,121
Main and Branch Canals ...	71,132	78,180	69,132	38,548	39,532	49,071
Distributaries	21,345	28,322	31,078	14,107	8,760	17,982
Drainage and Protective works ...	2,186	2,918	5,629	1,361	801	2,597
Transport Service*	2,357	2,956	25,724	3,063	894	9,893
Total ...	1,22,581	1,35,749	1,56,392	80,778	63,783	1,00,318

Regarding reduction in the working expenses a brief account has been given underneath Table III.

* No Transport Service is maintained by Government on the Canal. The figures shown against it are those shown by Examiner in his administrative accounts for "working steamers, &c."

TABLE XXII.—MAINTENANCE AND REPAIRS—CANALS AND DISTRIBUTARIES.

CANALS, BRANCH CANALS, AND DISTRIBUTARIES.	EXPENDITURE.					COST PER MILE.				
	Average of triennial period ending March 1899	Period under Review.			Average of triennial period ending March 1902.	Average of triennial period ending March 1899.	Period under Review.			Average of triennial period ending March 1902.
		1899-1900.	1900-1901.	1901-1902.			1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8	9	10	11
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Canal										
Do.										
Do.										
Do.										
Do.	98,531	1,15,998	55,515	52,533	74,682	2052·73	2416·62	1156 56	1094·44	155·87
Branch Canal										
Do.										
Do.										
Do.										
Distributaries	28,322	31,078	14,107	8,760	17,982	100·07	109·81	49·84	30·95	63·54
Do.										
Do.										

There was a very satisfactory reduction in the maintenance charges per mile of both Main Canal and Distributaries. The rate for the Main Canal was brought down from Rs. 2,416 in 1899-1900 to Rs. 1,094 in 1901-1902, and that for the distributaries from Rs. 109 to Rs. 31 ; the rates are probably as low as can be expected in the future.

Table XXIII.—SILT-CLEARANCE AND DREDGING.

Locality.	Average of triennial period ending March 1899.		Period under review. 1899-1900.		1900-1901.		1900-1902.		Average of triennial period ending March 1902.	
	Quantity.	Cost.	Quantity	Cost.	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.
1	2	3	4	5	6	7	8	9	10	11
	Silt-clearance by hand.									
	C. ft.	Rs.	C ft.	Rs.	C. ft.	Rs.	C. ft.	Rs.	C. ft.	Rs.
	1,351,407	6,936	2,937,725	17,369	52,900	1,106	48,214	359	1,012,946	6,278
Total ...	1,351,407	6,936	2,937,725	17,369	52,900	1,106	48,214	359	1,012,946	6,278
	Dredging.									
Working Dredgers	5,914,566	32,497	3,796,920	26,850	3,438,663	17,550	3,653,501	19,568	3,629,695	21,323
Repairs to dredging plant	...	27,308	...	32,879	...	9,701	...	19,487	...	20,689
Total ...	5,914,566	59,805	3,796,920	59,729	3,438,663	27,251	3,653,501	39,055	3,629,695	42,012

There was great reduction in the quantity of silt dredged during the triennial period under review as, on account of the discontinuance of the mail steamer service, the tidal entrances had not to be dredged as low as before. The tidal reach between Kultapara and Kantapookur was closed for silt clearance in 1899-1900, which explain the large expenditure incurred during that year in silt clearance.

HIJILI TIDAL CANAL.

42. TABLE I.—CAPITAL ACCOUNT.

HEAD OF ACCOUNT.	Outlay to end of March 1899.	OUTLAY DURING—			Outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
DIRECT CHARGES.	Rs.	Rs.	Rs.	Rs.	Rs.
Works	18,04,149	Nil	Nil	Nil	18,04,149
Establishment	5,83,411				5,83,411
Tools and plant	1,42,304				1,42,304
Suspense	.....				...
Loss by exchange	22,790				22,790
Total ...	25,52,654	Nil	Nil	...	25,52,654
Less—Receipts on capital account ...	925			88	1,013
Total direct charges ...	25,51,729	Nil	Nil	(—)88	25,51,641
Indirect charges	63,513			...	63,513
Total outlay, direct and indirect ...	26,15,242	Nil	Nil	(—)88	26,15,154

The remodelling works on the canal were completed in the year 1896-97. During the triennial period under review no works under original construction were executed.

43. TABLE II.—LENGTHS OF CHANNELS.

DESCRIPTION OF CHANNEL.	LENGTH OF CHANNEL IN MILES.				
	At end of March 1899.	Increase or decrease during—			At end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Navigable canals ...Miles	29	Nil	Nil	Nil	29
Branch canals (for irrigation only) ... ... „	Nil	Nil	Nil	Nil	Nil
Distributaries ... ... „					
Village channels ... ... „					
Permanent outlets ... No.					
Temporary „ ... ... „					
Drainage channels ...Miles					
Area protected from flood ...Acres					
Gross area under command ... „					

There was no change in the length of the canal which remained the same, viz., 29 miles from the junction of the lock channel and the Hooghly river at Gowankhally to Kalinagar on the Rasulpur river.

46. TABLE XVII.—NAVIGATION.

PARTICULARS.	AVERAGE OF TRIENNIAL PERIOD ENDING —		PERIOD UNDER REVIEW.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
Number of miles, open ... No.	29	29	29	29	29	29
Toll-collections ... Rs.	58,658	84,675	51,796	45,472	45,909	47,726
Rate of toll per mile ... ,,	2,023	2,916	1,786	1,568	1,583	1,646
Tollage on boats per ton per mile ... ... Pies	3·1	3·1	2·9	2·9	2·9	2·9
Number of boats plying cargo and passengers, including empties ... No.	15,180	20,704	15,446	14,428	15,238	15,037
Tonnage of cargo and passenger boats, including empties ... Tons	193,523	267,391	185,808	161,598	155,581	167,662
Estimated value of cargo, including rafts ... Rs.	45,37,728	66,75,876	42,07,942	38,14,259	41,07,558	40,43,253

The decrease in the tollage receipts is mainly due to the opening of the Bengal-Nagpur Railway in 1899, which diverted the traffic and caused the companies to discontinue their steamer services.

47. TABLE XVIII.—MISCELLANEOUS REVENUE.

PARTICULARS.		AVERAGE OF TRIENNIAL PERIOD ENDING—		PERIOD UNDER REVIEW.			Average of triennial period ending March 1902
		March 1896.	March 1899	1899-1900.	1900-1901.	1901-1902.	
1		2	3	4	5	6	7
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Sales of water		...	...	...	...	...	...
Water-supply of towns ...		...	...	...	...	...	...
Plantations		27	22	17	34	16	22
Other canal produce ...		527	642	650	648	727	675
Water-power		...	...	...	...	...	...
Rents of buildings ...		250	253	327	301	376	333
Fines		...	2	...	2	...	1
Miscellaneous	Rents of lands	...	...	...	...	...	...
	Fisheries ...	...	...	...	...	...	...
	Cost of process	437	553	444	892	920	752
	Sale of old materials.	...	...	...	...	...	...
	Other items ...	...	...	...	...	...	...
Total ...		1,241	1,472	1,438	1,877	2,033	1,783

48. TABLE XIX.—PLANTATIONS.

DIVISION.	1899-1900.				1900-1901.				1901-1902.				1899-1900.				1900-1901.				1901-1902.			
	Trees over 12 feet.	Saplings from 4 to 12 feet.	Seedlings under 4 feet.	Total.	Trees over 12 feet.	Saplings from 4 to 12 feet.	Seedlings under 4 feet.	Total.	Trees over 12 feet.	Saplings from 4 to 12 feet.	Seedlings under 4 feet.	Total.	Receipts.	Expenditure.	Profit.	Loss.	Receipts.	Expenditure.	Profit.	Loss.	Receipts.	Expenditure.	Profit.	Loss.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Balasore Division	7,714	5,427	5,452	18,593	8,756	7,061	5,582	21,399	9,535	7,183	4,044	20,762	17	...	17	...	34	...	34	...	16	...	16	...
Total ...	7,714	5,427	5,452	18,593	8,756	7,061	5,582	21,399	9,535	7,183	4,044	20,762	17	...	17	...	34	...	34	...	16	...	16	...

49. TABLE XX.—MAXIMUM FLOODS OF THE YEAR.

NAME OF RIVER.	Locality.	1899-1900.		1900-1901.		1901-1902.		Highest recorded flood.	
		Date.	Reading.	Date.	Reading.	Date.	Reading.	Date.	Reading.
1	2	3	4	5	6	7	8	9	10
Hooghly	Gewankhally	24th July and 23rd August 1899.	115·90	12th August 1900	116·10	26th Nov. 1901 ...	*117·60	Cyclonic storm of 1874.	123·2
Huldi	Etamogra	24th June 1899 ...	116·20	12th ,, ,, ...	116·40	Ditto ..	*118·10	Mr. Verfannes' record without date.	120·32
Rasulpur	Kalinagar	20th September 1899.	114·50	12th ,, ,, ...	114·60	Ditto ...	*114·90	26th August 1888	118·50

* Cyclonic storm-wave of 26th November 1901.

The floods during the year 1901-1902 were higher than those of the previous two years, but they did no damage tothe canal. The heavy local rain in July and August of the year 1900-1901, however, flooded considerable tracts of low-lying rice lands, but good crops were eventually secured, as the lands were drained in time to allow of new seedlings being planted.

50. TABLE XXI.—MAINTENANCE AND REPAIRS.

HEADS.	AVERAGE OF TRIENNIAL PERIOD ENDING—		PERIOD UNDER REVIEW.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
tensions and improvements ...	6,213	1,372	2,337	Nil	Nil	779
REPAIRS.						
ad works	Nil	Nil	Nil	Nil	Nil	Nil
in and Branch Canals ...	24,148	20,430	21,543	15,071	12,584	16,399
tributaries	Nil	Nil	Nil	Nil	Nil	Nil
ainage and Protective Works	Nil	Nil	Nil	Nil	Nil	Nil
ansport Service ...	1,989	1,340	1,092	1,714	1,758	1,522
Total ...	32,350	23,142	24,972	16,785	14,342	18,700

There was considerable decrease in maintenance and repairs of the main canal during 1901-1902, compared with the two previous years and averages of the two triennial periods ending March 1896 and 1899. The principal item of expenditure was silt clearance by dredging. The expenditure on the working of steamers during 1900-1901 was, however, slightly in excess of the year 1900-1901.

51. TABLE XXIII.—SILT-CLEARANCE AND DREDGING.

LOCALITY.	SILT-CLEARANCE BY HAND.									
	Average of triennial period ending March 1899		Period under review.						Average of triennial period ending March 1902.	
			1899-1900.		1900-1901.		1901-1902.			
	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.
1	2	3	4	5	6	7	8	9	10	11
	C. ft.	Rs.	C. ft.	Rs.	C. ft.	Rs.	C. ft.	Rs.	C. ft.	Rs.
Canal	1,416,821	5,935	152,337	571	...	...	...	...	50,779	190
Total ...	1,416,821	5,935	152,337	571	...	...	...	...	50,779	190
	DREDGING.									
Canal	628,317	5,871	1,153,022	9,188	1,257,573	9,183	979,147	6,288	1,129,914	8,220
Repairs to dredging plant Rs.*										

* Please see Orissa Coast Canal statement.

During the triennial period under review, two dredgers, viz., Marchant No. III and Bruce No. II, were at work in Ranges I and II of the Canal. The average quantity dredged during the period was 1,129,914 c. ft., at a cost of Rs. 8,220, as compared with 628,317 c. ft. dredged during the period ending March 1899, at a cost of Rs. 5,871. The increased expenditure was mainly due to the silt-clearance of Range I parallel to the supply channel, and of the supply channel itself at Gewankhali, where a large accumulation of silt had taken place.

SONE CANALS.

52. The Capital outlay and other particulars of the Sone Canals are given below:—

TABLE I.—CAPITAL ACCOUNT.

HEAD OF ACCOUNT.	Outlay to end of March 1899.	OUTLAY DURING—			Outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
DIRECT CHARGES.	Rs.	Rs.	Rs.	Rs.	Rs.
Works	1,88,07,937	11,164	8,824	4,082	1,88,32,007
Establishment ...	52,16,639	2,531	1,972	939	52,22,081
Tools and plant ...	21,83,313	(−)18,575	(−)1,204	...	21,63,534
Suspense	23	(−)23	...	...	...
Loss by exchange ..	52,240	...	...	...	52,240
Total ...	2,62,60,152	(−)4,903	9,592	5,021	2,62,69,862
Less—Receipts on capital account.	4,17,150	3,371	...	25,172	4,45,693
Total direct charges ...	2,58,43,002	(−)8,274	9,592	(−)20,151	2,58,24,169
Indirect charges ..	9,17,496	354	276	131	9,18,257
Total outlay, direct and indirect.	2,67,60,498	(−)7,920	9,868	(−)20,020	2,67,42,426

The construction estimate of these canals is closed. During the triennial period under review a sum of Rs. 24,070 for works only was spent as chargeable to the open Capital account under 43—Minor works and navigation. The following were the principal works constructed: A gangway to the Dehri headsluices for working the kurries and shutters; alterations to the Kao syphon to enable it to be utilised as an escape during the *kharif* season; an additional escape to the Bhojepur distributary, an escape channel to the Katherain distributary and a number of permanent outlets for village channels.

53. TABLE II.—LENGTH OF CHANNELS.

DESCRIPTION OF CHANNEL.		LENGTH OF CHANNEL IN MILES.				
		At end of March 1899.	Increase or decrease during—			At end of March 1902.
			1899-1900.	1900-1901.	1901-1902.	
1		2	3	4	5	6
Navigable canals (both for irrigation and navigation)	Miles	218½	...	...	...	218½
Branch canals (for irrigation only)	„	148¾	...	...	...	148¾
Distributaries	„	1,229¼	(−)12	...	...	1,217¼
		M. Ft.	M. Ft.	M. Ft.	M. Ft.	M. Ft.
Village channels ...	„	2,981—3,001	(+)31—490	(+)46—2,757	+55—3,705	3,114—4,673
Permanent outlets ...	No.	3,596	(+)222	(+)225	+163	4,206
Temporary „ ...	„	2,095	(−)197	(−)173	+155	1,880
Drainage channels ...	Miles	No information available.	No information available.	No information available.	No information available.	...
Area protected from flood ...	Acres					
Gross area under command	„	1,733,509	...	...	...	1,733,509

There were no changes in the lengths of the main and branch Canals. In distributaries there was a decrease of 12 miles due to the abandonment of a portion of the Emamganj distributary taking off the Patna Canal. The mileage of village channels increased from 2,981 miles 3,001 feet to 3,114 miles and 4,673 feet at the end of March 1902. The number of permanent outlets increased from 3,596 to 4,206, while the temporary outlets decreased from 2,095 to 1,880. The gross area under command remained the same

In the following supplementary tables are given the details of the lengths, &c. of the channels by Divisions at the close of the triennial period under review:—

TABLE II(*a*).—CANALS AND DISTRIBUTARIES.

NAME OF CANAL.	1901-1902.					
	Navigable Canals.	Canals for irrigation only.	Distributaries.	Area protected from flood.	Area under command.	Area provided with distributaries.
1	2	3	4	5	6	7
	Miles.	Miles.	Miles.	Acres.	Acres.	Acres.
Eastern Division. Sone — Eastern main ...	7¼	...	9	...	15,462	15,462
Eastern Division. Sone — Patna	79	...	329	...	390,693	364,237
	86¼	...	338	...	406,155	379,699
Arrah Division — Arrah	65½	...	206¼	...	229,433	229,433
Arrah Division — Dumraon Branch ...	...	40¼	149	...	209,817	209,817
Arrah Division — Behea Branch ...	...	31	115	...	179,104	179,104
	65½	71¼	470¼	...	618,354	618,354
Dehri Workshops Subdivision Western Main	9	...	...	...	...	...
Buxar Division — Western Main ...	12½	...	46¼	...	89,480	89,480
Buxar Division — Gurra Choubey Branch ...	...	38	55½	...	173,440	114,522
Buxar Division — Buxar	45¼	...	196	...	233,600	203,580
Buxar Division — Chousa Branch ...	...	39½	111¼	...	212,480	134,514
	57¾	77½	409	...	709,000	542,096
SONE CANALS ...	218½	148¾	1,217¼	...	1,733,509	1,540,149

TABLE II(*b*).—VILLAGE CHANNELS.

DIVISION.	CHANNELS COMPLETED TO END OF—					
	1899-1900.		1900-1901.		1901-1902.	
1	2		3		4	
	M.	Ft.	M.	Ft.	M.	Ft.
Eastern Sone ...	535	4,888	547	4,030	566	4,504
Arrah ...	1,352	4,825	1,363	64	1,372	4,420
Buxar ...	1,123	4,338	1,148	2,154	1,175	1,029
Total ...	3,012	3,491	3,059	968	3,114	4,673*

* Includes 2,837 miles 3,127 feet of channels made by villagers at their own cost.

TABLE II(*c*).—OUTLETS.

DIVISION.	Permanent outlets.	Temporary outlets.	Total.	Area irrigated in 1901-1902.	Area per outlet in 1901-1902.
1	2	3	4	5	6
	No.	No.	No.	Acres.	Acres.
Eastern Sone ...	1,168	710	1,878	101,248	53·92
Arrah	2,120	316	2,436	255,013	104·9
Buxar	918	854	1,772	201,233	113·56
Total 1901-1902 ...	4,206	1,880	6,086	557,494	91·69
Total 1900-1901 ...	4,043	1,725	5,768	432,413	74·9
Total 1899-1900 ...	3,818	1,898	5,716	454,093	79·44

A steady increase in the length of village channels and the construction of permanent outlets is maintained.

The receipts from water-rates and miscellaneous revenue show a steady increase during the period under review, whereas navigation receipts have decreased by almost fifty per cent. owing to the opening of the Mogulsarai-Gaya Railway. The average cost of maintaining the canals has remained almost stationary, so that the net financial result is slightly lower than that of the previous triennial period.

55. The interest charges for and up to the end of the triennial period are given below :—

TABLE III(*a*).—INTEREST.

	To end of March 1899.	Period under review.			To end of March 1902.
		1899-1990.	1900-1901.	1901-1902	
1	2	3	4	5	6
Interest charges	Rs. 2,38,43,658	Rs. 10,33,555	Rs. 10,33,569	Rs. 10,33,371	Rs. 2,69,44,153

56. TABLE IV.—RAINFALL.

		Averages of 22 stations.				
		Average of fifteen years ending March 1899.	Period under review.			Average of 3 years ending March 1902.
			1899-1900.	1900-1901.	1901-1902.	
1		2	3	4	5	6
		Inches.	Inches.	Inches.	Inches.	Inches.
Kharif season	August ...	12·64	11·41	7·79	11·34	10·18
	September ...	7·26	4·04	8·46	6·06	6·19
	October ...	2·59	1·01	2·76	0·40	1·39
	Total ...	22·49	16·46	19·01	17·80	17·76
Rabi season	November ...	0 29	0·00	0·00	0·13	0·04
	December ...	0·21	0·00	1·01	0·00	0·34
	January ...	0 61	3·13	2·47	0·32	1·97
	February ...	0 61	0·47	1·40	0·05	0·64
	Total ...	1·72	3·60	4·88	0·50	2·99
Whole year ...		44·28	54·68	39·90	29·19	41·26

In the year 1899-1900 the rainfall of the year although above the average, was deficient and unseasonable during the *kharif* season. In June and July there was heavy rainfall. In August the season for the transplantation of rice, the rainfall decreased and was irregularly distributed. In September the falls were very light, and the rain practically ceased about the middle of the month. In the early part of October during the *hathiya* there was no rain, and none fell till almost the end of the month. In the *rabi* season the rainfall in January was very beneficial to the crop.

In the year 1900-1901 the rainfall, though below the average and much less than that of the previous year, was heavier during both the *kharif* and *rabi* seasons. In August during the transplanting period for rice it was deficient and there was, consequently, a great demand for canal water. The rainfall during the *hathiya* was heavy. The excessive fall during the *rabi* season did much damage to the crop.

The year 1901-1902 was one of very scant rainfall—in fact the lowest on record since 1877-78. Owing to deficiency of rainfall in the *kharif* season, there was a brisk demand for canal water during the rice transplanting season and also in the *hathiya*. Very little rain fell during the *rabi* season, with the result that a very much large area was irrigated than usual.

The following supplementary table shows the rainfall during the "Hathia Nachatra," and for the succeeding ten days since 1888; it is based on the 22 stations mentioned in subsidiary form IV E(*a*):—

TABLE IV(*a*).—RAINFALL DURING *HATHIA*.

YEAR.	Average rainfall during the "Hathia," 25th September to 8th or 9th of October.	Average rainfall during ten days after the "Hathia."	IN THE SHAHABAD DISTRICT ONLY.	
			Period of maximum demand for a water in any period of ten days.	Average daily discharge during that period per 100 acres leased.
1	2	3	4	5
	Ins.	Ins.		C. ft.
1888	0·18	Nil	12th to 31st October	2·00
1889	0·02	0·11	6th to 15th „ ...	1·92
1890	4·15	0·86	10th to 19th „ ...	1·48
1891	1·45	Nil	14th to 23rd „ ...	2·04
1892	0·86	Nil	10th to 19th „ ...	1·90
1893	3·13	4·39	8th to 17th „ ...	1·58
1894	3·97	2·67	15th to 24th „ ...	1·31
1895	0·90	Nil	7th to 16th „ ...	2·12
1896	Nil	Nil	6th to 15th „ ...	1·85
1897	2·42	1·86	25th September to 4th October.	1·75
1898	0·01	1·03	5th to 14th October	1·81
1899	Nil	1·02	5th to 14th „ ...	1·35
1900	4·71	1·66	22nd to 31st „ ...	1·59
1901	1·09	0·04	5th to 14th „ ...	1·67

This table is instructive, as it shows that the *hathia* rainfall was only favourable in five years out of fourteen.

57. TABLE V.—AREAS IRRIGATED.

YEAR.	Kharif.	Rabi.	Perennial.	Total.	RAINFALL.		
					Kharif season.	Rabi season.	Year.
1	2	3	4	5	6	7	8
	Acres.	Acres.	Acres.	Acres.	Inches.	Inches.	Inches.
1893-94 ...	280,528	66,458	19,790	366,776	22·24	1·34	47·66
1894-95 ...	258,361	41,664	17,109	317,134	32·37	3·28	58·22
1895-96 ...	261,485	115,343	18,394	395,222	16·64	0·15	36·56
Triennial average	266,791	74,489	18,431	359,711	23·75	1·53	47·48
1896-97 ...	316,941	215,390	22,825	555,156	12·50	2·15	32·05
1897-98 ...	299,061	103,371	31,013	433,445	22·90	1·39	52·98
1898-99 ...	304,778	110,035	25,983	440,796	32·51	1·93	54·91
Triennial average	306,927	142,932	26,607	476,466	22·64	1·82	46·65
1899-1900 ...	305,464	123,298	25,331	454,093	16·46	3·60	54·68
1900-1901 ...	323,438	90,984	17,991	432,413	19·01	4·88	39·90
1901-1902 ...	331,909	195,413	30,172	557,494	17·80	0·50	29·19
Triennial average	320,271	136,565	24,498	481,333	17·76	2·99	41·26

The average area irrigated during the period under review was greater than that of the two preceding periods. There has been a steady increase of rice-irrigation: the area under *rabi* irrigation is dependent entirely on the amount of rainfall after the 25th September.

TABLE VI.—AREAS IRRIGATED BY LEASES.

CROP.	AVERAGE OF TRIENNIAL PERIOD ENDING—		PERIOD UNDER REVIEW.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Kharif... Long-term leases ...	238,677	264,039	276,657	280,532	284,679	280,622
Kharif... Season leases ...	28,114	42,888	25,813	41,598	36,345	34,585
Kharif... Sale by volume ...	.....	.....	1,277	445	9,275	3,666
Kharif... Unauthorized irrigation.	.....	.....	1,717	863	1,610	1,397
Total ...	266,791	306,927	305,464	323,438	331,909	320,270
Rabi ... Long-term leases ...	32,875	33,505	32,866	31,663	32,638	32,389
Rabi ... Season leases ...	41,614	109,427	89,407	58,857	161,301	103,188
Rabi ... Unauthorized irrigation.	.....	.....	1,025	464	1,474	988
Total ...	74,489	142,932	123,298	90,984	195,413	136,565
Hot weather Season leases ...	18,431	26,607	25,198	17,796	30,107	24,367
Hot weather Unauthorized irrigation.	.....	.....	133	195	65	131
Total ...	18,431	26,607	25,331	17,991	30,172	24,498
Total ... Long-term leases ...	271,552	297,544	309,523	312,195	317,317	313,011
Total ... Season leases ...	82,199	168,617	140,418	118,251	227,753	162,140
Total ... Others	5,960	10,305	4,152	1,967	12,424	6,182
GRAND TOTAL ...	359,711	476,466	454,093	432,413	557,494	481,333

The gradual increase of long-term leases is satisfactory. In 1901-1902 the maximum area of 317,317 acres was reached. The total area irrigated in that year (557,494 acres) is the largest on record.

TABLE VII.—AREAS IRRIGATED BY DIVISIONS.

DIVISION AND YEAR.	Long-term leases.	SEASON LEASES.			Total.	RAINFALL.		
		Kharif.	Rabi.	Hot weather.		Kharif season.	Rabi season.	Year.
1	2	3	4	5	6	7	8	9
	Acres.	Acres.	Acres.	Acres.	Acres.	Inches.	Inches.	Inches.
Eastern Sone Division 1899-1900 ...	70,558	10,182	8,898	2,357	91,995	15·84	3·85	55·01
Eastern Sone Division 1900-1901 ...	70,901	14,022	4,057	1,286	90,266	18·44	4·38	42·08
Eastern Sone Division 1901-1902 ...	70,379	15,504	10,955	4,410	101,248	16·33	0·05	29·91
Triennial average ...	70,613	13,236	7,970	2,684	94,503	16·87	2·93	42·33
Arrah Division 1899-1900 ...	149,148	6,446	28,937	17,255	201,786	17·55	3·51	56·13
Arrah Division 1900-1901 ...	151,440	10,747	22,362	13,436	197,985	18·35	5·00	38·61
Arrah Division 1901-1902 ...	154,951	11,418	69,742	18,902	255,013	14·17	0·29	24·80
Triennial average ...	151,846	9,537	40,317	16,531	218,261	16·99	2·93	39·85
Buxar Division 1899-1900 ...	89,817	12,179	52,597	5,719	160,312	15·08	4·18	54·74
Buxar Division 1900-1901 ...	89,854	18,137	32,902	3,269	144,162	19·56	5·86	38·48
Buxar Division 1901-1902 ...	91,987	20,308	82,078	6,860	201,233	19·95	0·49	28·66
Triennial average ...	90,552	16,875	55,859	5,283	168,569	18·19	3·44	40·63

These figures call for no comment. The area under long lease has ostalm reached its maximum.

TABLE VIII.—LONG-TERM LEASES.

DIVISION.	Leases lapsed on 31st March 1899.	1899-1900.		Leases lapsed on 31st March 1900.	1900-1901.		Leases lapsed on 31st March 1901.	1901-1902.	
		Leases entered into during the year.	Total area under lease in the year.		Leases entered into during the year.	Total area under lease in the year.		Leases entered into during the year.	Total area under lease in the year.
1	2	3	4	5	6	7	8	9	10
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Eastern Sone ...	18,803	15,016	67,818	7,459	7,870	68,128	10,948	9,611	67,787
Arrah	22,530	23,475	140,977	16,105	19,026	143,589	24,615	27,748	146,272
Buxar	13,625	13,471	86,112	14,847	15,233	86,498	9,427	11,724	88,698
Total ...	54,958	51,962	294,907	38,411	42,129	298,215	44,990	49,083	302,757

The former rate for long leases was Rs. 2 per acre. The existing rate, which was introduced from 1st April 1897 and which will remain in force up to the end of March 1903, is Rs. 2·8 per acre.

To show the popularity of these long leases, and the eagerness of the people for canal irrigation, the areas applied for and refused in each Division during the triennial period under review are entered in the following table :—

TABLE VIII(*a*)—AREAS APPLIED FOR AND REFUSED.

DIVISION.	1899-1900.		1900-1901.		1901-1902.	
	Area for which applications were received.	Area for which applications were refused.	Area for which applications were received.	Area for which applications were refused.	Area for which applications were received.	Area for which applications were refused.
1	2	3	4	5	6	7
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Eastern Sone ..	22,249	8,743	16,654	9,554	8,738	8,512
Arrah	33,149	9,726	24,233	6,485	36,079	8,647
Buxar	35,413	21,943	38,866	23,099	27,012	15,939
Total ...	90,811	40,412	79,753	39,138	81,829	33,098

On this question of the renewal of leases the Executive Engineer, Arrah Divison, writes as follows:—"The canals are now practically leased up to their limit, and any new lease can only be taken if it is very favourably situated. Additions are possible, however, by reducing the amount of water given to the lease by taking a higher duty or adding to existing blocks without increasing the size of the outlet, and it is chiefly by these means that the increase in the area has been attained, and in a few years will be the only way of extending the area."

Leases cancelled during the triennial period are noted in the following statement:—

TABLE VIII(*b*).—LEASES CANCELLED.

DIVISION.	UNDER RULE 22 (*iii*).						UNDER RULE 24.					
	1899-1900.		1900-1901.		1901-1902.		1899-1900.		1900-1901.		1901-1902.	
	No.	Area in acres.	No.	Area in acres.	No.	Area in acres.	No.	Area in acres.	No.	Area in acres.	No.	Area in acres.
1	2	3	4	5	6	7	8	9	10	11	12	13
Eastern Sone	1	37	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Arrah	Nil	Nil	2	119	1	104	Nil	Nil	2	152	2	349
Buxar	Nil	Nil	Nil	Nil	Nil	Nil	1	153	5	839	2	93

TABLE VIII(*c*)—UNAUTHORIZED IRRIGATION.

58. The table below shows the areas and amounts assessed under unauthorized irrigation during the triennial period under review:—

DIVISION.	KHARIF.		RABI.		HOT-WEATHER.		TOTAL.		
	Area assessed.	Area irrigated but not assessed.	Area assessed.	Area irrigated but not assessed.	Area assessed.	Area irrigated but not assessed.	Area assessed.	Area irrigated but not assessed.	Amount assessed.
1	2	3	4	5	6	7	8	9	10
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.
Eastern Sone ...	313	1,970	385	413	7	84	705	2,467	4,359
Arrah	848	1,678	933	489	58	189	1,839	2,356	9,220
Buxar	449	2,318	156	1,228	.....	141	605	3,687	3,726
Total 1901-02 ...	1,610	5,966	1,474	2,130	65	414	3,149	8,510	17,305
Total 1900-01 ...	863	3,338	464	1,111	195	251	1,522	4,700	9,460
Total 1899-1900 ...	1,717	3,950	1,025	1,854	133	244	2,875	6,048	17,461

The favourable *Hathia* rain in 1900 caused a reduction in that year. The increase in the other two years was due to the fact that there was no rain during the *Hathia*. The Executive Engineer, Arrah Division, notes:—

"If unauthorized irrigation is to be stopped at all, it can only be done by imposing such a rate as will make the cultivator understand that it will be no benefit to him to take water without authority, even though by so doing he may save his crop and get a fair outturn."

The Superintending Engineer agrees with this, and recommends that the rate should be deterrent. The Chief Engineer, however, does not share this opinion. The average area irrigated but not assessed during the past three years was 4,418 acres. This is not a large area when it is remembered how many long leases there are and the facilities which the villagers have of passing water on to the unleased fields. There can be only one solution of this difficulty and that is for the Canal Officers to see that leases are only granted where the boundaries are suitable and that the outlets are carefully proportioned to the areas leased.

59. The assessments under wastage of water were:—

TABLE VIII(*d*).—WASTAGE OF WATER.

DIVISION.	1899-1900.	1900-1901.	1901-1902.
1	2	3	4
	Rs.	Rs.	Rs.
Eastern Sone ...	183	.....	475
Arrah	908	660	1,493
Buxar	171	7	531
Total ...	1,262	667	2,499